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Directed By
PIERRE COFFIN
KYLE BALDA

Co-Directed By
ERIC GUILON

BEST ORIGINAL SCORE

HEITOR PEREIRA

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"THERE'S SOMETHING SPECIAL"
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BEST ANIMATED FEATURE

Produced by MIREILLE SORIA, p.g.a. | MARK SWIFT, p.g.a. Directed by DAVID SOREN

“Captain Underpants’ has leapt over the rest
to become the first serious major studio contender for this year’s
ANIMATED FEATURE OSCAR® ...” —ANIMATION SCOOP





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They say it's always darkest before dawn. Perhaps that's why many people working in the entertainment industry are feeling optimistic about the non-stop reports of sexual abuse and harassment that have been unearthed since the first accusations against producer Harvey Weinstein made news over two months ago. It seems that every day we see more headlines about powerful men working in the entertainment industry who abused their positions to victimize employees and those who sought work in the business.

The animation and vfx industry hasn't been immune to this epidemic of abuse. We read in horror about incidents involving *The Loud House* creator Chris Savino,

which led to his firing by Nickelodeon. Then in October, we were proud of the 200 women and gender-nonconforming people in the industry who sent an open letter to wipe out sexual harassment in the animation industry. The letter asked all studios to institute "clear and enforceable sexual harassment policies," and that studios further pledge to take reports of workplace harassment seriously.

Additionally, the letter asked that male colleagues start speaking up and standing up for others when they see sexist remarks or sexual harassment happening at the studio, and hoped that the union creates new policies to expel those who are found guilty of "conduct which is prejudicial to the welfare of the guild."

Women in Animation has launched several initiatives, including a sexual harassment resource page on womeninanimation.org, the ROAR art project, expert panel and an in-depth industry survey in collaboration with the guild.

Perhaps one of the most shocking events that happened only a week before we went to press was the announcement that Pixar and Disney chief creative officer John Lasseter admitted to his "missteps" and said he would take a six-month sabbatical after reports of long-term inappropriate behavior toward women surfaced in numerous publications. As we close this issue, it is still unclear whether Disney was investigating these accusations against Lasseter.

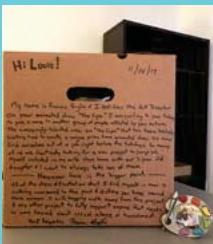
We have all witnessed how the unethical behavior of those in power can have disastrous effects on everyone who works on their projects. In early November, after Louis C.K. admitted that the sexual misconduct allegations against him were true, TBS suspended his animated project *The Cops*, and many people lost their jobs right before the holiday season.

Today, many of us feel this great urgency to create work environments in which those who have been harassed or abused feel empowered to speak up. For now, it's up to all of us to be more vigilant and pro-active in our day-to-day actions and use this new awareness to bring about a seismic cultural shift.

As actress Meryl Streep recently spoke out, "This is a door that will not be closed. It will be very difficult for people to conduct their lives the way they have in the past. 'Oh, that's just locker room talk. Oh, that's just the way men are!' No, it's not. We're civilized people, and we learn from our mistakes."

Ramin Zahed
Editor in Chief
ramin@animationmagazine.net

QUOTE OF THE MONTH



'All of the stress and frustration I find myself in now is nothing compared to the pain and distress you have caused those women. I will happily walk away from this and any other project to fully support anyone that needs to come forward about sexual abuse or harassment.'

— The Cops art director Francis Giglio, in a letter he wrote to Louis C.K., after TBS halted production on the series because of C.K.'s sexual misconduct.



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The Loud House



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“THE PRODUCTION
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ARE STUNNING.”

The Atlantic

“WONDERFUL.
An impressively epic
production.”



okja

BEST VISUAL EFFECTS
ERIK-JAN DE BOER
LEE JEON HYOUNG



The New York Times

“The movie belongs to its title character and her digitally conjured, genetically modified ilk. ‘OKJA’ IS A MIRACLE OF IMAGINATION AND TECHNIQUE.”

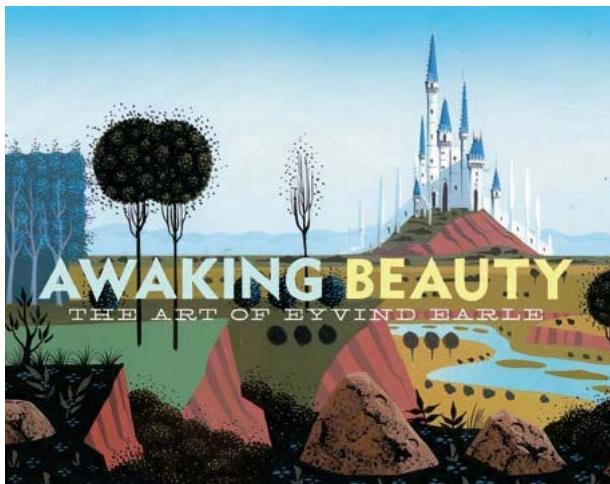
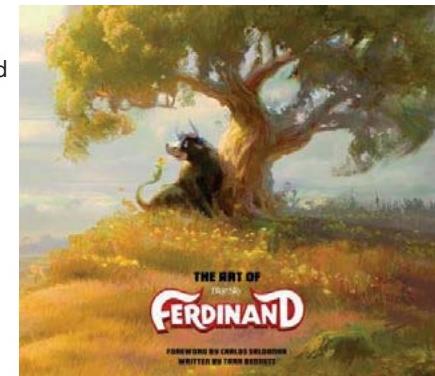
FOR YOUR
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The Animation Lover's Holiday Gift Guide



FULLY BOOKED

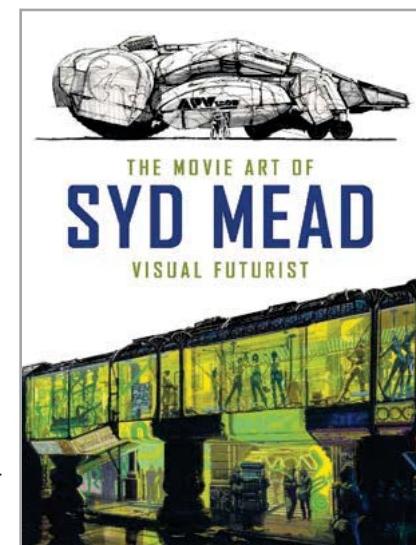
» ***The Art of Ferdinand*** (Titan Books, \$40) puts the colorful world of Blue Sky's latest release into your hooves, with 160 pages of behind-the-scenes art and insights. Author Tara Bennett (*The Art of Rio*) deftly guides readers on a visually rich journey through an animated Spain, from Ferdinand's quiet farm to the bustle of the big city. Plus, foreword by Carlos Saldanha. Little ones will love the Viking Books re-issue of Munro Leaf's ***The Story of Ferdinand*** with adorable plush toy (\$19).



» Released a few months ago, ***Awakening Beauty: The Art of Eyvind Earle*** (Weldon Owen, \$50) is a must-have for fans of mid-20th century animation and artwork. Assembled by The Walt Disney Family Museum in conjunction with a commemorative show, the book explores Earle's work both in the studio, on films like *Sleeping Beauty*, and beyond. Much of the written information will be familiar to readers of his autobiography, but the artworks are beautifully reproduced.

» Our stocking-stuffer pick this year is the new boxed set of ***Walt Disney's Nine Old Men: The Flipbooks*** (Disney Edition, \$60). Introduced by Pete Docter, each little gem features a line-drawn scene originally animated by legends Ub Iwerks, Norm Ferguson, Bill Tytla, Ham Luske, Art Babbitt, Grim Natwick, Freddie Moore, Hal King and John Sibley.

» With his latest project *Blade Runner 2049* released, it's a great time to get re-acquainted with ***The Movie Art of Syd Mead: Visual Futurist*** (Titan Books, \$50). The 250+ page hardcover is the most comprehensive collection yet of Mead's visionary conceptual work over the past 40 years. With images, sketches and never-before-scene material, each page gives fresh insight into the master's creative practice.



DELUXE TOY BOX

» Spoil the **Star Wars** fans on your list! Big kids (like us) would love to unwrap the **Jedi Challenges AR Experience** kit from Lenovo (\$200, Best Buy) or an **App-Enabled Droid** from Sphero (\$150), available in **BB-9E**, **BB-8** and **R2-D2** flavors. And for lucky little Jedi-in-training, you cannot beat the **Landspeeder 12 Volt Ride On** from Radio Flyer, a mere \$500 at Toys R Us.



» For unstoppable indie animators, gamers and VR pioneers, nothing could beat a full-body suit of **Enflux Motion Capture Clothing**, a relative steal at just \$500. The gear includes free Unity SDKs and Blender motion-capture plugin, plus free email support and a 12-month guarantee. Available in figure-flattering black!



» If you were thinking about a holiday marriage proposal with a flashy ring, can we suggest instead the fantastic, interactive, fully mobile and app-enabled **Tachikoma** from Cerevo? At \$1,800, it'll show the *Ghost in the Shell* fan of your dreams that you really care. (available at gstore.cerevo.com)

» How **Marvelous**! Bodyfriend Inc. has come out with striking **Massage Chairs** inspired by Captain America, Iron Man and

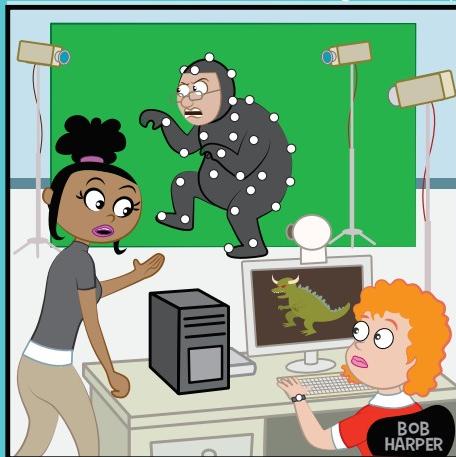
Spider-Man (\$1,580, bodyfriend.com) to unwind after a long day of crime fighting. Logan Hollowell has sparkle covered with the *Thor: Ragnarok* jewelry line, including

Hela Green Agate Constellation Ring (\$350, loganhollowell.com). More practical is Ukonics' **Thor Hammer Tool Kit** (\$99, thinkgeek.com). It's true, you really can license anything.



KEY FRAME

by Bob Harper



THE RENDER IS LOOKING GREAT, BUT STILL NOT AS SCARY AS THE SOURCE.

Bob Harper is a professional animator who is a creator of a wide variety of content. He is currently directing an animated series in China.

HOME (ENTERTAINMENT) FOR THE HOLIDAYS

» Calling all anime-niacs! Gift-worthy new releases include Project Itoh's dystopian meditation on terrorism and security *Genocidal Organ* (Funimation, \$35 BD | \$30 DVD); Sentai Filmworks BD box sets of *The Squid Girl S1 & 2* (\$200) and *Haven't You Heard? I'm*



Sakamoto!

(\$170) packed with goodies; Bayview BD Ultra Edition sets of



Revolutionary Girl Utena

20th Anniversary (\$230) and **Mobile Suit Gundam Wing** (\$270); and the third season of **Sailor Moon Crystal** (VIZ, \$80 LE BD | \$40). Gift cards can go towards the two-movie **Barefoot Gen** set, out Dec. 26 (Discotek, \$30 BD | \$20).

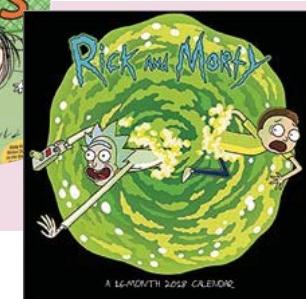
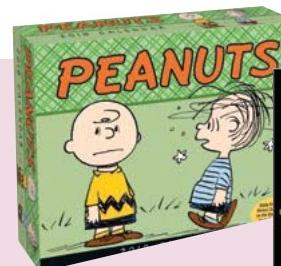


» For a touch of European eccentricity, we recommend Stéphane Aubier & Vincent Patar's cult-hit stop-motion series **A Town Called Panic: The Collection** (GKIDS, \$25 BD). Enjoy the antics of plastic heroes Cowboy, Indian and Horse, who never fail to attract chaos.



LOOK TO THE FUTURE!

Peanuts 2018 Day-to-Day Calendar
Rick and Morty 16-Month 2018 Calendar
Wallace & Gromit Official Slim 2018 Calendar
Disney Villains 2018 Calendar



...AND LOOK GOOD IN THE FUTURE!

Game of Thrones Dragonstone Tee (\$25, store.hbo.com)

My Neighbor Totoro

Cosplay Dress (\$41-43, hottopic.com)

Nickelodeon X Love Tribe

Collection (lovetribeapparel.com | Macy's)

Steven Universe

Jacket (\$60, cartoonnetworkshop.com)

Stranger Things

Team Barb Tee (\$29, boxlunch.com) ♦



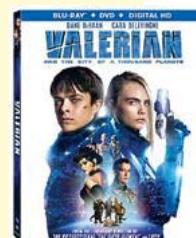
» Brush up on your superhero lore with the limited edition **DC Universe: 10th Anniversary Collection** Blu-ray box (WB, \$300 SRP). In addition to 30 animated DCU movies and five shorts – from classic comic-book arcs like *Superman Doomsday* to toon originals like *Gods and Monsters* – the set includes over 20 hours of brand-new and classic bonus content, exclusive collectible coins and a 40-page adult coloring book. (No, not the "I left 'safe search' off doing a Google image search for Harley Quinn" kind of adult.)



» Take home the interlocking action of **The LEGO Ninjago Movie** on DVD, BD, BD 3D and 4K (\$29, \$36, \$45, \$45) from WB, and relive Green Ninja Lloyd's (Dave Franco) struggles against the forces of ultimate darkness – lead by his dad! The upper echelon releases tack on tons of extras, including behind-the-scenes featurettes, mini-movies, music videos and deleted scenes.



» Feed your visual sweettooth with the pure eye-candy of **Valerian and the City of a Thousand Planets** (Lionsgate, \$40 BD). Adapted from the popular French comics, director Luc Besson takes full advantage of cutting-edge animation and vfx to follow Valerian (Dane DeHaan) and Loreline (Cara Delevigne) on a frenetic interstellar adventure. Also on 4K Ultra HD (\$43) and DVD (\$30).



January Planner

5 Happy 77th birthday to **Hayao Miyazaki**, who is working hard as ever on his "final" feature, *How Do You Live?*



7 Find out which 2017 toon tops HFPA's list at the **75th Annual Golden Globe Awards.**



8 **Digital Hollywood** dishes the latest in storytelling tech during **Consumer Electronics Show** at the Las Vegas Convention Center. [digitalhollywood.com | ces.tech]

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Digital Hollywood Tracks at 2018 CES®
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9 Also in Sin City this week, the original **VR Fest** returns in partnership with top software and studio names. [virtualrealityfestival.com]



12 The little bear from darkest Peru returns in ***Paddington 2***. Latin American hit ***Condorito*** also gets a limited U.S. release through Lionsgate today.



Sydney's Bondi Beach hosts 10 days of international



shorts at **FlickerFest**. (But don't forget to turn in your Oscar nomination ballots!) [flickerfest.com.au]



18 Park City, UT celebrates the art of cinema with the **Sundance Film Festival** and its funky little brother, **Slamdance** (19th-25th). [sundance.org | slamdance.com]

19 Studio Ponoc's first film ***Mary and the Witch's Flower*** casts a spell in select theaters. (Psst, GKIDS and Fathom Events will present a special premiere screening Jan. 18th with filmmakers interview!)



20 Find out who takes the feature animation and children's TV program prizes at the **Producers Guild Awards**.



23 **Oscar nominations** are announced today! Start working on your acceptance speeches...



25 The 45th **Festival Int'l de la Bande Dessinée** celebrates the finest in comics and graphic novel art in Angoulême, France. Also opening today, Copenhagen's **VOID Int'l Animation Film Festival**,

which puts a spotlight on "the unused potential of animation." [bdangouleme.com | voidfilmfestival]

26 Jeremy Renner stars as a little fox with big dreams in AMBI/AIC Studio's ***Arctic Justice: Thunder Squad***, in limited release through Open Road.



To get your company's events and products listed in this monthly calendar, please e-mail mercedes@animationmagazine.net.



Ferdinand's Triumphant Journey

How director Carlos Saldanha and his team at Blue Sky delivered a lovely CG-animated movie with a powerful message inspired by the classic children's book.

By Ramin Zahed

The story of Ferdinand, the peace-loving bull who'd rather be smelling flowers than fighting matadors in the ring, has captured the hearts of millions since it was first told in the 1936 book by author Munro Leaf and illustrator Robert Lawson. This month, a new generation of moviegoers can enjoy a delightful CG-animated family movie inspired by the classic tale when 20th Century Fox Animation and Blue Sky Studios' *Ferdinand* is released in theaters.

Directed by Academy Award-nominated helmer Carlos Saldanha, who is best known for directing three of the *Ice Age* movies and the two *Rio* features, *Ferdinand* follows the adventures of a peace-loving bull (voiced by John Cena), who is separated from the loving farmer and daughter who have adopted him after he's mistaken for a vicious beast. Along the way, the kind-hearted bull makes many

friends and has a life-changing effect on the lives of the misfit animals he meets on his journey. In the film's thrilling climactic scene, Ferdinand has to face the matador El Primero in a packed arena, but he valiantly stays true to his peaceful nature, and inspires all those around him as well.

The plan to bring Ferdinand's tale to the big screen began more than six years ago when Saldanha was still working on *Rio 2*. "I was very excited when I found out that Fox and Blue Sky were thinking of developing a movie based on the book," he recalls. "I had read the book and fallen in love with the story and its wonderful message of acceptance and diver-

sity. I thought that this was the right moment to take this lovely little book and develop it into a family movie for today's audiences."

For long-time Blue Sky Studios producer Lori Forte, the film offered a chance to reunite with Saldanha, who had worked with her on the first three *Ice Age* movies. "Carlos had wanted to work on a movie which had a bull as its main character," she recalls. "I loved working with him on the *Ice Age* movies, and I missed him terribly. I knew that he was passionate about this project, and his strong feelings for the story and its message also inspired me and everyone else around him."

'The more research we did, the more it became obvious to us that people can interpret the story in so many different ways ... Our story has a deeper meaning in the difficult world that we all live in today.'

— Director Carlos Saldanha

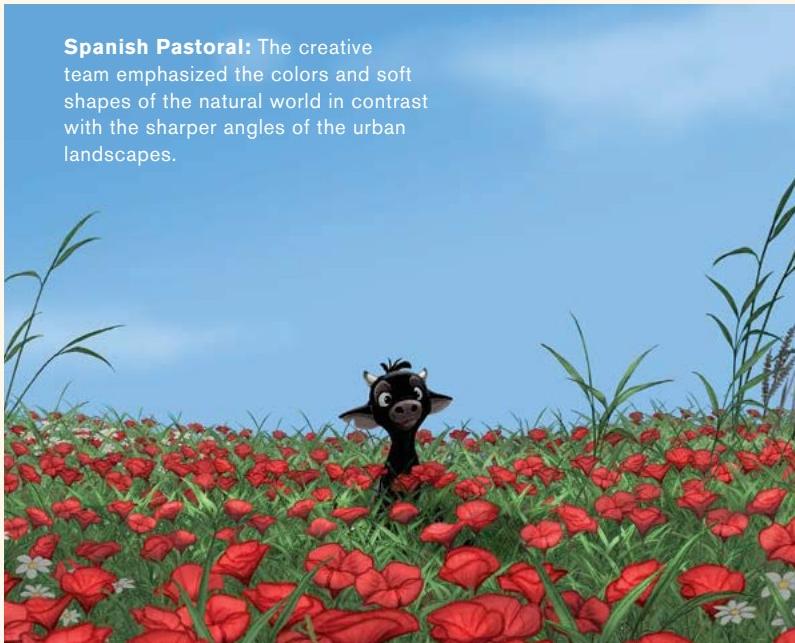


Expanding the Story

One of the major challenges in turning the brief 30-page book into a full-length feature was expanding its storyline and introducing new characters to accompany the central character on his journey. Sal-



Spanish Pastoral: The creative team emphasized the colors and soft shapes of the natural world in contrast with the sharper angles of the urban landscapes.



danhha and Forte point out that the deeply layered messages of the property allowed them to expand the storyline in a logical fashion. "The more research we did, the more it became obvious to us that people can interpret the story in so many different ways," notes Saldanha. "Our story has a deeper meaning in the difficult world that we all live in today. The other characters that we added to the movie also share the same issues as Ferdinand."

A Spanish Sojourn

As both the book and the movie are set in colorful and historic places in Spain, Saldanha and his team made a special trip to the country to seek visual inspiration and authentic backdrops for their project. "We were inspired by the beauty of the landscapes and unique architecture of Spain," says the director. "The color palette of the movie has a lot of earth

tones to it, and is very different from the tropical colors that we used in the *Rio* movies. We took in the magnificent architecture of some of the cities and traveled south to the lovely region of Andalusia."

The mountaintop city of Ronda in Spain's Málaga province inspired the location for the farm where Ferdinand finds happiness with the young girl Mina and her father. "We wanted the art to reflect the beauty of this world," explains Saldanha. "We wanted the locations to express the possibilities of an animated movie, but also be truthful to the art, history and culture of Spain."

A Marriage of Art and Technology

Thanks to the latest advancements in CG technology, the artists and technical teams at Blue Sky were able to deliver animation that is

meticulous in its attention to detail – from each blade of grass in the field, to the texture of a matador's cape, to the play of light and shadow in the landscape of Andalusia.

"Every year, we develop new versions of the proprietary rendering software at Blue Sky [called CGI Studio]," explains Saldanha. "We made the best use of the technology to make a big artistic impression. *Ferdinand* is not a movie with huge special effects. Our goal was to best use the technology to create the right look that helps serve the art direction and the lighting. Everything has been ray-traced meticulously, and it looks beautiful. The team succeeded in solving complex challenges in the depiction of the crowd scenes as well. They were able to pull it off in a way in a very subtle way, so that the technology isn't overtly obvious on the screen."



Familiar Voices: Ferdinand features a wildly eclectic voice cast, led by John Cena as the charming hero, Kate McKinnon as Lupe the goat, Bobby Cannavale as Valiente and David Tennant as Angus.



Glorious Colors & Dynamic Designs

Art director Thomas Cardone (*Rio 2*, *Horton Hears a Who!*, *Ice Age: The Meltdown*) says when you mention *Ferdinand* to people everyone seems to remember two basic things about the story. "Everyone says, 'Oh yeah, that's the movie about the bull who only wants to smell flowers and doesn't want to fight,'" he points out. "I found the project instantly appealing because it's a big story with a few characters, so you can create this intimate feeling. It is not a movie where someone has to save the world, but it's a story with a lot of heart."

Cardone notes that character designer Sang Jun Lee came up with the philosophy for

Ferdinand's physical look, which was born out of the friendly bull's personality. "You have this good-natured, big-hearted character that is

all shape was very important. He is also on screen in most of the film's shots, so we made a lot of effort to really nail down his form and

the way he moves and is positioned throughout the movie."

The specific landscapes of the Southern region of Spain and its flora and fauna played a major role in inspiring the film's design principle. "The rolling hills, the olive trees, all those sweeping curves were in harmony with the smooth curves of Ferdinand," explains Cardone. "Anything that opposes him is more angular and vertical – like the man-made structures. The same is true for his adversary, the matador. The humans are skinny and taller than they would be in real life, so



'The fight is held in the afternoon, so half the stadium is in light and the other half is in the shadows. Ferdinand is dark against the light background, while the matador is light against the dark. It really amplifies the emotions and really makes the scene pop.'

- Art director Thomas Cardone

very large, but is also very curvy," he explains. "Ferdinand is a big, black bull, and there are no marks or costumes, so his silhouette and over-

that dictated the height of the buildings, the doors, the cars ... everything around them. Our two main characters really influenced the



whole shape and style of the movie."

Ferdinand's inner emotions are also reflected in the choice of background locations. As Cardone explains, the farm in Ronda the heroic bull longs to return to is depicted as a green and happy place, with lots of flowers and vegetation. "But the bull ranch where he is imprisoned is arid looking, which you also get in Spain during the more severe seasons," he notes.

The region's white stucco buildings with their terra-cotta roofs also provide neutral backgrounds against which the artists played around with memorable splashes of color. "We placed bold colors, like a bright blue wheelbarrow, a turquoise bucket or a green farm implement, against the neutral canvas," recalls Cardone. "We would also balance the compositions with differently colored animals. The color red was especially reserved for specific key moments, like Ferdinand's favorite poppies in the farm, or the carnations in the bull ring, or the matador's cape."

One of Cardone's favorite scenes is the climactic sequence where Ferdinand faces El Primero in the ring. "I love the lighting and the drama of it," he notes. "Staging is very important to us, and we worked hard to bring out the light and shadow values in that sequence. The fight is held in the afternoon, so half the stadium is in light and the other half is in the shadows. Ferdinand is dark against the light background, while the matador is light against the dark. It really amplifies the emotions and really makes the scene pop."

The art director points out that all the artistic elements work nicely together to deliver the heartfelt message of the movie. He concludes, "I think this movie has such a big heart, so I was very pleased with the way the style, the design, the lighting and all the technical element join forces to serve a common goal." ♦

Fox/Blue Sky's *Ferdinand* will begin its theatrical journey on December 15.

Five Ferdinand Factoids!

- *Ferdinand* is Blue Sky Studios' 12th animated feature. It's the studio's seventh feature directed or co-directed by Carlos Saldanha.
- First published in 1936, *The Story of Ferdinand* written by Munro Leaf and illustrated by Robert Lawson has been translated into more than 60 languages and sold millions of copies worldwide.
- Leaf wrote the story on a whim in an afternoon in 1935, mostly to provide his friend Lawson with a project to showcase his talents.
- A first-edition copy of the *The Story of Ferdinand* sold for \$16,500 in 2014.
- The story was adapted by Walt Disney as a short animated film titled *Ferdinand the Bull* in 1938. Directed by Dick Rickard, *Ferdinand the Bull* won the 1938 Academy Award for Best Short Subject Cartoon. ♦



FANTASTIC FABLES FROM FRANCE

Benjamin Renner and Patrick Imbert's hand-drawn feature *The Big Bad Fox and Other Tales* offers plenty of visual delights and slapstick humor.

By Charles Solomon

Five years ago, Benjamin Renner charmed audiences and earned an Oscar nomination for *Ernest & Celestine*, the tale of an unlikely friendship between a strong-willed artistic mouse and a lazy bear with a pronounced sweet tooth.

Renner's new hand-drawn film *The Big Bad Fox and Other Tales* (*Le Grand Méchant Renard et autres contes*), which he co-directed with Patrick Imbert, offers similarly minimal imagery, but broader slapstick comedy. The three fables that make up the 80-minute film are presented by a troop of animal actors who perform with more enthusiasm than skill. Although the animation is fluid and the film never

feels like the artists cut corners, *Big Bad Fox* was made for an astonishing 2.5 million – just under \$3 million U.S., less than some half-hour TV episodes here.

The feature, which was produced by Folivari, the Paris-based studio founded by veteran French producer Didier Brunner (*The Triplets of Belleville*, *Ernest & Celestine*, *Kirikou* movies), has grossed over \$4.9 million in France and several other countries since it began its run last June.

At the center of the stories is Pig, a hard-working, long-suffering farmer who must endure the assistance of his well-intended but thick-witted friends, Rabbit and Duck. Renner

says the characters “never really had names, although in my head they are all called ‘Henry.’ Only the three chicks have names: they have the names of my nephews and nieces, because they are my nephews and nieces.”

In the title tale, the inept Fox steals the eggs of one of Pig’s hens, hoping they’ll grow up to become a meal. (He usually has nothing to eat but turnips from Pig’s garden.) But when the three chicks hatch, they imprint on Fox as their mother and shower him with the only affection he’s ever received. What’s a Fox to do – especially when the meaner, smarter Wolf is monitoring his actions?

Lasting Impression:
Director Benjamin Renner's childhood visit to a farm in southern France inspired the story behind *Big Bad Fox and Other Tales*.



A Boyhood Memory

The idea for the story had been gestating a long time: As a boy, Renner visited family friends who had a farm near Montauban in southern France. "Once, I was sitting by an incubator and the chicks were about to hatch," he recalls. "My father told me, 'If you stay here, the chickens will see you when they hatch. They'll think you're their mother and you will have to take care of them.' I went away immediately, because I was too scared to be a single mom at six."

The idea that chicks might regard him or some other inappropriate creature as their mother puzzled Renner. "For years, I wondered how can this happen," he continues. "What if they see a dog or a fox? When I was a teenager, I started to make some drawings about the fox with the chickens. I always told myself, I will tell this story some day. After I finished *Ernest & Celestine*,

I was so tired. I said, 'Okay maybe it's time to tell this story; maybe I can do it right now.'

He turned the story into a graphic novel, then adapted it to the screen. The other two tales – *A Baby to Deliver* (*Un bébé à livrer*), which is based on another comic by Renner,

sist Pig join them in delivering toys his place. Needless to say, complications arise.

Imbert and Renner had become friends while they were working on *Ernest & Celestine*. "I was the supervisor of animation on *Ernest*; we met on the teaser, before the movie

went into full production," Imbert recalls. "At the time, Benjamin was artistic designer, and I was just an animator. But the director of the teaser didn't want to do the movie, so everybody moved up one title."

Imbert had no trouble in adapting his friend's stories:

'I love to draw, but I don't really like taking too much time. For me, drawing is mostly to tell a story, that's why I always stop my drawing when we understand what's going on.'



– Director Benjamin Renner

and *The Perfect Christmas* (*Le Noël parfait*) – were directed by Patrick Imbert. In the former, complications arise after a lazy stork cons Pig, Rabbit and Duck into taking a baby to her proper home. In the latter, when they break a plastic decoration on Pig's barn, Rabbit and Duck think they've killed Santa Claus and in-

"I know Benjamin well and we share a common culture and common influences. I know how to fit into the spirit of his work, and can create new jokes and new scenes when I need to."

The designs for the characters in *Ernest* had been pared down, allowing the expressive animation to carry the story. The characters in

Comedy Classics:
Iconic Looney Tunes shorts and the silent comedies of Buster Keaton and Charlie Chaplin influenced the animated movie's creative team.



Big Bad Fox are even simpler constructions of lines, but the well-timed and often hilarious animation brings them to life. For Pig, the animators may be moving only a dozen lines, but they capture his frustration and impatience with the half-baked plans Rabbit and Duck hatch. To use master animator Eric Goldberg's phrase, "the characters look like they enjoy being animated."

The simple designs reflect Renner's philosophy of drawing: "I love to draw, but I don't really like taking too much time. For me, drawing is mostly to tell a story, that's why I always stop my drawing when we understand what's going on. Once my intention is clear and you understand it, I stop. I'm not going to add more precise lines under the character's eye. If the audience understands, that's enough. I like this way of drawing; the simplicity is something Patrick and I have in common."

Echoes of Chaplin and Keaton

Big Bad Fox won a Special Jury Prize at the inaugural Animation Is Film festival in Los Angeles for its "celebration of the joys of traditional cartoon animation." Like Chuck Jones

and the other great Warner Bros. directors, whom they admire, Renner and Imbert looked for inspiration in the films of Charlie Chaplin, Buster Keaton and the other great silent comedians. "Buster Keaton did his own stunts, and sometimes they were really dangerous," says Imbert. "It's amazing what they were able to do with their bodies. We do these things in animation, but it's easy – we can cheat with grav-

where the stories unfold. "We really wanted the film to have a watercolor effect. Watercolor is a technique you often use when you sketch, so there's a very spontaneous feeling to it, which is why I wanted to add it," Renner says. "We cheated a little because we did it on computers, so it's not as spontaneous, but it has a feeling of spontaneity. We tried to incorporate watercolor stains here and there we couldn't

'I think the watercolor also makes a film look warmer ... If you want a film to look like the good old days, you have to go inside the computer and 'break' something to give the art the correct feeling.'



– Co-director Patrick Imbert

ity and weight – but they did it for real. They were able to touch the audience not only through the jokes, but through the pure hearts of the characters they played."

"They're anti-heroes, but with pure hearts," agrees Renner. "They don't mean harm – even if it's a kid doing something terrible, he doesn't mean any harm. You realize that when you see him."

The lines on the characters look like brush strokes and the backgrounds are minimal watercolors that suggest the fields and forests

control, and we're pretty happy with the result. We were lucky to work with Zazyk (two artists who use that joint pseudonym when they collaborate), who were the lead background artists on *Ernest and Celestine*.

"I think the watercolor also makes a film look warmer,"

concludes Imbert. "The computer tends to make things look flat and the result can feel cold. Full HD resolution is so precise when you see it on TV; if you want a film to look like the good old days, you have to go inside the computer and 'break' something to give the art the correct feeling."

GKIDS will release *The Big Bad Fox and Other Tales* in U.S. theaters in February 2018.

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A Suitcase Packed with Memories

Ru Kuwahata and Max Porter's quiet and poignant *Negative Space* emerges as one of the most acclaimed shorts of the year.

By Ramin Zahed

When animation directors Ru Kuwahata and Max Porter came across Ron Koertge's poem *Negative Space* on Facebook (of all places), they had a feeling it would be a good inspiration for a short project. "The text had this rare directness, balancing the sentimental with humor perfectly, and the last line felt like a satisfying 'period,' but could also be interpreted multiple ways," recalls Kuwahata. "We contacted Ron a week later and he joked that he wanted \$50 for the rights so that he could bet on horses at Santa Anita. We ended up paying him a bit more than that."

The stop-motion animated short, which is also titled *Negative Space*, explores a father-and-son relationship and how specific memories have a powerful resonance throughout our lives. Kuwahata and Porter knew right away that stop-motion was the perfect method to illustrate the theme. "We felt strongly that the tone of the original text demanded a direct, distinctly human process," say

"By animating real materials that flex and wrinkle, we hoped that we would activate the same connections for the people who watch the film."

A Unique Physicality

The directors made a conscious decision to use scale to exaggerate the space that the father takes up in his son's life, and how that presence changes over time. "Stop-motion gives a unique physicality to space that graphic mediums do not have, and was the most effective technique to communicate that feeling," they explain.

The project took approximately two years to complete. They spent the first year on development, pre-production and grant application. The actual animation production took nine months to complete – three months to build sets and props, three months of shooting and three months of post-production.

"It was important that the film feel personal, and we were nervous that we wouldn't be able

week. This structure allowed us to become very close with the people we worked with and we ended up spending a lot of time discussing our relationships to our families."

The directors were adamant that the characters have large, bulbous heads and tiny feet. "You don't see those proportions often in stop-motion because you're asking the little puppet to defy the law of gravity," says Porter. "To deal with this, we had to use support rigs for every single character in every single shot. That became a post-production headache because we had to remove multiple overlapping rigs and shadows."

The filmmakers say they count Wendy Tilby and Amanda Forbis (*When the Day Breaks*) and Koji Yamamura (*Mount Head*) as three of their animation idols. They are also huge believers of the magic of stop-motion animation.

"In stop-motion, you can see how an animator is an actor and that their performance and timing is



the filmmakers. "Being that the film is about a relationship through a physical process – packing a suitcase – we knew that we wanted to emphasize the wrinkles of a shirt, the crease of the leather belt and the crinkle of plastic." As the Baltimore-based animators dug deeper, they discovered that it was interesting to look back at their own childhoods and how memories are closely connected to the sensations of texture and touch. "We remember the itchiness of a wool sweater from childhood or the upholstery of our parents' sofa from the early '80s," they point out. to maintain that intimacy while working with other people," says Kuwahata. "We doubled down on pre-production by preparing visual reference material and creating written explanations for all of our directorial decisions, but at some point we realized that letting go a bit and encouraging our team to bring their own ideas and experiences to the film would only make the project better. The majority of the production happened at Ciclic Animation (Vendôme, France) and Ikki Inc. (Orbigny, France) where the team members lived with us during the



closely linked to how they're feeling on a particular day," says Porter. "And when the last frame of a shot is taken, it becomes a record of that moment in time." Kuwahata adds, "I love how the textures come alive. You really feel like there is life in every object."

They also have some great words of advice for aspiring artists. "When you find true inspiration, hold on to it for dear life, because these things are fragile and can disappear as quickly as it came." ♦

Check out the trailer at vimeo.com/205982517.

A Thoroughly Modern Fairy Tale

The directors of the acclaimed special *Revolting Rhymes* discuss the difficult task of animating Roald Dahl's unforgettable book. By Ramin Zahed

Although fairy-tale characters have been a familiar staple of animated TV shows and movies, we have never seen them quite as lively and modern as the ones depicted in *Revolting Rhymes*, a charming, CG-animated, two-part TV movie which has been showered with numerous awards since it first debuted on the BBC in the U.K. last Christmas.

Directed by Jakob Schuh and Jan Lachauer, who also worked on the acclaimed *The Gruffalo* and the Oscar-nominated *Room on the Broom*, the short is based on a book by Roald Dahl, which has lots of fun with Little Red Riding Hood, the Big Bad Wolf, Snow White and the Three Little Pigs. The project was produced by Magic Light Pictures' Martin Pope and Michael Rose, with animation by Cape Town-based studio Triggerfish.

"When we began throwing around ideas for an adaptation, we got very excited by the notion of intertwining Dahl's separate tales — placing them all in shared universe, each story influencing the other's progress," says Lachauer. "Weaving together these separate, rhymed stories without adding extra lines whilst (hopefully) adding the enjoyment of the author's wonderful tales became a mixture of higher math and imagined conversations with old Roald Dahl."

The team began playing around with the story in mid-2014, and the project was greenlit in early 2015 and delivered last December. More than 80 people worked on the labor-intensive project, which had to be delivered in time for Dahl's centennial celebration. "We were tasked with working with a decisively lower price tag per minute than *The Gruffalo* or *Room on the*

Broom," reveals Lachauer. "Finding a design and a technique that would allow us to create something hopefully similarly exciting was a big part of our challenge."

Schuh praises Dahl's remarkable source material, which includes inspiring takes on female

So, we set out to keep his characters, his designs, get close to the essence of his wonderful shapes without copying his style and line work."

Another source of inspiration was the puppet theater collection of the Stadtmuseum, which is located right behind the director's

favorite café in their hometown of Munich. "It was clear that *Revolting Rhymes* needed a different approach than our previous specials, so we thought about different ways of stylizing 3D environments and characters," notes Lachauer. "We marveled at the puppets' carved and painted heads, hands and legs; the old marionette stages with flat, beautifully rendered stage props and layering. They were the perfect 3D representation of Blake's linework. We took many, many photos, which became and stayed one of our main guidelines for the modeling and texturing of characters and sets."



Co-director
Jakob Schuh

'As we were working towards a very hard deadline — the Dahl centennial — production had to start midway through the story process. This created a very tight and cramped schedule where many things had to be done in parallel.'



— Co-director Jan Lachauer

empowerment, materialism and tradition. "You can feel the immense fun Dahl had with this and it's quite infectious. At the same time, there's a very touching 'I want to set things right' theme running through all the stories. His reinterpretation of these ancient tales — although in itself more than 30 years old — feels incredibly timely in a lot of places."

Old Puppets and Wiggly Artwork

The film's animation was heavily influenced by Quentin Blake's illustrations. "They were fantastic visual starting points, obviously, but they were also quite daunting," says Schuh. "Trying to copy his wiggly artwork would have felt like blasphemy to me. But at the same time, not incorporating the core of his designs would have felt like leaving an essential part of the book behind.

It has been especially gratifying to take in all the great feedback. As Schuh recalls, "I had a sweet moment a week ago in Brussels, where, at the very end of a long interview, the interviewer suddenly clocked that the different stories in the film had had nothing to do with one another in Dahl's original book," he notes. "She asked me to basically start the interview all over again, because she felt she now had more pressing questions!"

Lachauer also shares his own favorite response. He recalls, "One of the most memorable moments for me was at the French premiere when a little boy indignantly shouted 'Oh la laaa!' during the scene where the first Ugly Stepsister gets her head chopped off!" ♦

For more information, visit www.magiclightpictures.com.

He Just Loves to Steal Cake!

The new animated special *The Highway Rat* has all the ingredients of a children's classic.

After producing *The Gruffalo*, *The Gruffalo's Child*, *Room on the Broom*, *Stick Man* and *Revolting Rhymes*, Magic Light Pictures co-founders Michael Rose and Martin Pope have certainly emerged as the go-to experts in quality animated children's specials. This month, they keep the tradition going with a charming adaptation of a book by Julia Donaldson and Axel Scheffler called *The Highway Rat*. The CG-animated special – which features the voices of David Tennant (*Doctor Who*), Rob Brydon, Tom Holland, Nina Sosanya and Frances de la Tour – follows the adventures of a lawless rodent (voiced by Tennant) who enjoys stealing travelers' pastries, puddings, chocolate and cake.

"Two years ago, right after we finished *Stick Man*, we were thinking of other works that would make great animated specials," recalls Rose. "We came across this great book by Donaldson and Scheffler, who also did the *Gruffalo* books, *Room on the Broom* and *Stick Man*. I thought it sounded terrific because it centered on this swashbuckling rat who gets into terrible trouble because of his love of cake and everything sweet."

Director Jeroen Jaspaert, who also worked with Rose on *Stick Man*, says the surreal quality of the premise appealed to him immediately. "You have this image of a small rat sitting on a horse, which is the cover art for the book," says Jaspaert. "The notion of developing this bad guy/rat that we love to hate on this journey was very exciting. It was quite different from the *Stick Man* in our previous special.

This world had a more fairy-tale quality to it, with animals that wore human clothes and had jobs."

To produce the meticulously crafted animation for the project, Rose and Jaspaert tapped South Africa's famous Triggerfish Animation Studios, who also worked on *Stick Man* and *Revolting Rhymes*. A team of 80 worked on the animation, using ZBrush, Maya and Arnold as their tools of choice. According to the producer, the overall budget for the special was about \$2.5 million. As Rose puts it, "Magic Light's viewers want quality in these specials. They are all adaptations of classic books, and they need to last a long time. Funny enough, the more expensive they get, the appetite for improving on the previous special also increases. We always want the best quality, and the team at Triggerfish always up our standards as well."

"We certainly didn't make it easy on ourselves as we have this very agile CG-animated cartoon rat on a realistic moving horse."

— Director Jeroen Jaspaert

One of our biggest challenges for the animation team was the scope of the world. "We have five main speaking roles, about 10 main anthropomorphic characters, and 40 overall characters," notes Jaspaert. "These animals have bushy tails, but they are also wearing clothes. It's also a road movie, so we travel from one place to another, so we have lots of sets. We expanded many of the book's story elements. The Rat's partner

in crime is a very expressive horse, which is also very hard to animate. We certainly didn't make it easy on ourselves as we have this very agile cartoon rat on a realistic moving horse."

The book's illustrations were the first point of reference for the creative group. "The drawings look very charming, but they are mostly done from a side view," explains Jaspaert. "Our challenge was making them look equally appealing in 3D. That's why we began the process by sculpting all the characters in clay, to get that nice hand-made quality. They look like figurines – you can actually see the paint marks on them. We really wanted the charm of the illustrations to translate to the tactile, CG animation."

Rose, whose other 2017 project *Revolting Rhymes* was just nominated for a European Animation Award, says he loves the way the project



brings to life the story of the Highway Rat in such a dynamic way. "You really feel the energy of this swashbuckling rat riding the horse," he says. "It's very different to the previous specials we've done, and it's really a fun-filled riot."

Jaspaert agrees. "It's really a miracle of small scale," notes the director. "You feel like you're witnessing an adventure movie. Animating these characters was a real joy as there was so much motion and agility in all the performances. We're very proud of that!" ♦

The Highway Rat will premiere on BBC One in the U.K. this Christmas.



Swashbuckler with Sweet Tooth: *The Highway Rat* features tactile CG animation depicting animal characters in meticulously crafted costumes.



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From Gamers' Fave to Streaming Success

How *Skylanders Academy* avoided the curse of many gaming franchises and became a show loved by both fans and Netflix bingers. By Ramin Zahed

It's a commonly held belief that developing a hugely popular game franchise into a well-crafted animated series is not a job for the faint of heart. The team behind the Activision Blizzard Netflix show *Skylanders Academy* will tell you that top-notch writing, artistic talent and an awesome animation studio are the essential ingredients to make a show like that really take flight.

The colorful and well-received series, which has been renewed for a third season coming to Netflix in 2018, follows the adventures of ragtag group of heroes, assembled by mentor Master Eon (Chris Diamantopoulos) to fight the evil plans of Kaos (Richard Steven Horvitz) and the Doom Raiders. Featuring a top-notch voice cast that includes Justin Long, Ashley Tisdale, Jonathan Banks, Bobcat Goldthwait, Norm Macdonald, Harland Williams and Felicia Day, the second season of the show introduced newcomers Cynder and Sprocket and found the heroes searching for answers about their past and fighting a powerful new adversary. (Recurring voice actors include Parker Posey, Susan Sarandon, James Hetfield, John

DiMaggio, Catherine O'Hara, Jim Cummings, Jason Ritter and Billy West.)

So how did this successful show escape the common pitfalls of the game-to-TV show development process? "Like a lot of Hollywood success stories, it all started with a phone call," recalls showrunner and exec producer Eric Rogers. "Activision and Blizzard called my agency because they wanted a writer to develop this property. After I met with industry veterans Sander Schwartz and Nick van Dyke, we decided to build the show around five main characters. They were looking for the same vibe as Professor X's School for Gifted Youngsters."

Rogers, who has written for shows as diverse as *Futurama*, *Teen Titans Go!* and *Brickleberry*, immersed himself in the Skylanders game and toys and came up with answers to questions like why audiences are going to love Spyro the Dragon and what Kaos is really all about. "I think these characters are amazing," Rogers points out. "The design and animation is fantastic. What was really appealing to me was that

we could give each of these characters their own unique voices, likes, dislikes and fears. The relationships between the characters are very important to us. The relationship between Kaos and his mom is a big part of the show."

Cool Kaos

Building a believable villain in the scheming portal master Kaos was another highlight. "Kaos is only a moustache twirler in the game, but in the TV series, we wanted more. You want to see why he became this dark dude, kind of like Walter White in *Breaking Bad*!" notes Rogers. "I had to reverse engineer Kaos, so we could see why he became this bad guy and why does he want to ruin Skyland?"

One of the biggest challenges for the creative team was creating the overall tone of the series. "Our goal was, make it kid friendly so that seven- to 12-year-old viewers would like it, but we wanted it to also appeal to their older brother and sister, and for parents to sit down and have a laugh as well. It was really about going for this sense of humor and sophistica-



Complex Characters: The writers take advantage of the serial format to offer more rewarding storylines and multi-layered characters in the second season of *Skylanders Academy*.

tion, so a wider age group could enjoy the storytelling and the characters' arc. I think that's why Nick and Sander found me appealing as a writer, because I came from *Futurama*. I started out as a writer's assistant on that show, which for me was the Harvard of comedy writing. That DNA is also part of what we brought to *Skylanders Academy*."

Veteran animation industry exec Sander Schwartz agrees. "Skylanders offers a very rich world of characters that come out of a gameplay that is first of its kind in the toys-to-life category," he notes. "Taking these characters that were created by the experts at Activision Blizzard was a great opportunity and presented a chance to offer fresh, exciting action adventures. The storytelling in this world that was created under Eric's supervision is really compelling, and the animation that was produced by TeamTO was stunning and helped create quite a beautiful show."

Dynamic Visuals

Skylanders is also one of the most ambitious series produced by TeamTO, the French studio behind such shows as *Angelo Rules*, *PJ Masks* and *Sofia the First*. "We started working on the show in 2015 and have produced 26 half-hours and are currently working on the third season," says studio founder and CEO Guillaume Hellouin. "Every episode of the show is quite sophisticated and is almost feature film quality. We have a large number of characters,

lots of crowds, high-end visual effects, elaborate lighting – and it's all done in a fast-paced schedule. You have to deliver one episode each week, and thankfully, we have the budget and great partners to stay on schedule."

Rogers says working on the second season of the show has been quite a blast for him and his team of writers. "We got to dig deeper in the characters and their back stories," he notes. "Spyro made this epic decision to turn

ered the final lock until April or May of 2017. We look at about a 10-month process from start to finish. Then we had from June to October to get the 13 episodes done. Right now, the writing for the third season is all finished, and we're deep into the animation for that season."

Positive Word of Mouth

Rogers and his team have been quite pleased with the way fans have embraced the show. "I

am a Twitter guy, and I banged the drum pretty hard when the show first premiered," he notes. "I am not trying to exaggerate here, but we've received almost 99 percent positive feedback. It's been also quite fun to see how everyone reacts to the finale of our second season. The jaw-dropping effect that we wanted to see was happening."



– Exec producer Eric Rogers

"We were able to make it a really connective show and sew it all together. I think one of the most important lessons we can learn is that the comedic side of the show is just as important as the action elements."

against his mother and join this supervillain league. He has been told by Master Eon that he's the only one of his kind that exists, that he's the golden child. Why does he need to carry that burden? That is the fun of having a second season, because the characters are there already and you can dig deeper."

Since the series doesn't have a traditional writers' room, Rogers and his script coordinator Brittany Jo Flores figure out the season's main storylines and use a team of talented freelancers to deliver the episodes. "It's a long process," says Rogers. "We started writing season two in June of 2016 and I don't think we deliv-

ered the final lock until April or May of 2017. We look at about a 10-month process from start to finish. Then we had from June to October to get the 13 episodes done. Right now, the writing for the third season is all finished, and we're deep into the animation for that season."

The first two seasons of *Skylanders Academy* are available on Netflix.



Summit founder Jean Thoren



Toon Masters by the Beach

The World Animation and VFX Summit wraps up another successful edition.

Some of the top creative stars working in the animation and visual effects industry shared their valuable knowledge at the sixth edition of *Animation Magazine's* World Animation and VFX Summit last month.

The four-day event kicked off with a wonderful evening awards gala, held at the Hotel Casa del Mar in Santa Monica. This year, voice actress Nancy Cartwright (Bart Simpson), producer Lori Forte (*Ice Age* movies, *Ferdinand*), director and Disney animator Glen Keane (*Dear Basketball*), French distributor PGS (co-founder Philippe Soutter), Frederator Studios founder and CEO Fred Seibert and DreamWorks TV Animation topper Mark Taylor were the distinguished recipients of the 2017 Hall of Fame Game Changer award.

The Hall of Famers received poignant tributes by their colleagues: *The Simpsons* exec producer Al Jean, Fox Family Animation president Vanessa Morrison, director John Musker (*Moana*, *Aladdin*, *The Little Mermaid*), kids TV producer Tom Lynch, former Nickelodeon and TV Land exec Herb Scannell and DreamWorks Television Animation head Margie Cohn. The ceremony was hosted by the always witty and wonderful Tom Kenny, the actor extraordinaire who is best known for voicing SpongeBob SquarePants.

Attendees had the opportunity to enjoy two

days of informative panels and lively discussions at the California Yacht Club in Marina del Rey, Calif. Among this year's inspiring speakers at the Summit were: Kyle Balda, Kobe Bryant, Vanessa Chapman, Stephen Clee, Mo Davoudian, John Derevlany, Joel Douek, Audrey Ford, Ruth Fielding, Michaela Hart, Guillaume Hellouin, Max Howard, Kevin Tod Haug, Terry Kallagian, Ken Katsumoto, David Kwok, Michael Hefferson, Cory Jamieson, Glen Keane, Dorota Kobiela, Iryna Kostyuk, Gregory Little, Tom McGrath, Peter McHugh, Chris McKay, Max Miceli, Chris O'Reilly, Sascha Paladino, Serge Patzak, Sandra Rabins, Timothy Reckart, John Robson, Adam Rumanek, Richard Scott, David Simon, David Soren, Carlos Saldanha, Sander Schwartz, Philippe Soutter, Frank Saperstein, Irene Sparre, Mark Taylor, Toper Taylor, Nicolas Trout, Tom van Waveren and Lin Zhang. The third day of the Summit featured master classes taught by Mary Duda, Archita Ghosh, Butch Hartman and Fred Seibert.

The 2017 Summit showcased panels on the making of some of the year's top animated features such as *Captain Underpants: The First Epic Movie*, *The Boss Baby*, *Loving Vincent*, *Despicable Me 3*, *The LEGO Batman Movie*, *The Star* and *Ferdinand*. It also focused on some of the innovations in new media, co-production opportunities, the future of streaming





and the changes in the TV landscape, the U.K. animation scene, the VFX of *Okja*, behind the scenes of Disney Junior's *Miles from Tomorrowland*, and the promise of the VR universe. One of the highlights was an insightful panel on the making of the acclaimed short *Dear Basketball*, with animation icon Glen Keane and basketball legend Kobe Bryant.

"This is our sixth year of bringing together some of the amazing people who work behind the scenes of our beloved industry," said event founder and *Animation Magazine* publisher Jean Thoren. "It's so rewarding to see talented folks from all over the world come together at the Summit to share their experiences and lay the groundwork for more quality productions in the future."

As Emmy-winning producer and veteran animation exec Sander Schwartz put it, "The World Animation and VFX Summit provides a much-needed forum

for professionals of all levels to meet, greet and to learn. Between the panel discussions, fireside chats and master classes, there's ample opportunity to meet new people from around the world, as well as to pursue new business opportunities."

We couldn't have done this event without the amazing support of our volunteers, panelists, attendees from all over the world and generous sponsors: CelAction, COP DreamWorks Animation, The Gotham Group, Illumination Entertainment, Natural Talent, Nickelodeon, Paris Images Digital Summit, the PGS Company, Shellhut/Tiny Island and WOW! Unlimited Media. A big shout-out to event director Kim Derevlany, who worked long hours for many months to make sure everything went seamlessly. ♦

If you missed the fun this year, we hope you can join us in 2018. For more info, visit www.animationmagazine.net/summit.



2018 Toon Timeline

Look how far we've come! Travel back down memory lane in five-year hops and visit some animation milestones with us.

1868 | 150 Years Ago

The **Kineograph** (a.k.a. flip book) is patented by English printmaker **John Barnes Linnett**.



1893 | 125 Years Ago

Chicago World's Fair visitors enjoy the **Kinetoscope**, a one-person film viewer created by **Thomas Edison** and **William Dickson**.



1918 | 100 Years Ago

Bray Studio and Max Fleischer release the first ***Out of the Inkwell*** cartoon, *Experiment No. 1* starring Koko the Clown.



1923 | 95 Years Ago

Walt Disney's first animation company, **Laugh-O-Gram Studio**, shut down – and he swiftly opens a new shop, Disney Brothers Cartoon Studio.

1928 | 90 Years Ago



Mickey Mouse debuts in Walt Disney and Ub Iwerks' ***Steamboat Willie***.



Godfather of manga **Osamu Tezuka** (*Astro Boy*) is born in Osaka on Nov. 3.

1933 | 85 Years Ago

Fleischer Studios releases the first ***Popeye the Sailor*** cartoon (featuring Betty Boop) and hires the first female studio animator, **Lillian Friedman**, an artist from Disney.



Disney releases Oscar-winning Silly Symphony ***The Three Little Pigs***.



The first ***King Kong*** movie debuts, with creature animation by Willis O'Brien.

Born this year are animator-director **Richard Williams** (*Who Framed Roger Rabbit?*, *The Thief and the Cobbler*) (March 19), *Peanuts* specials producer **Lee Mendelson** (March 24) and late great animator-director **Jimmy Murakami** (June 5).

Leon Schlesinger Productions is founded.



Richard Williams

1938 | 80 Years Ago

Retta Scott is hired at Disney (studio's first female animator to receive a screen credit).

The Special Achievement Award Oscar for Special Effects is given to ***Spawn of the North***.

A hyperactive gray rabbit appears as a precursor to **Bugs Bunny** in ***Porky's Hare Hunt*** from Leon Schlesinger, directed by Ben Hardaway and Cal Dalton. Huey, Dewey & Louie debut in Disney's ***Donald's Nephews*** (Jack King). Chuck Jones directs his first WB short, ***The Night Watchman***. The manic mallard gets his first solo short, ***Daffy Duck Goes to Hollywood***.



RKO releases Disney's Oscar-winning ***Ferdinand the Bull***, directed by Dick Rickard.

Born this year are Italian cartoon icon **Bruno Bozzetto** (March 3), mature animation maverick **Ralph Bakshi** (Oct. 29) and anime director **Noboru Ishiguro**.

Ferdinand the Bull

1943 | 75 Years Ago

The **National Film Board of Canada** officially opens the "Studio A" animation division under Norman McLaren in January.

Audiences enjoy ***The Yankee Doodle Mouse*** (Oscar winner), ***Red Hot Riding Hood***, ***Reason and Emotion***, ***Private Pluto*** (featuring proto-Chip 'n' Dale), the first Droopy cartoon ***Dumb-Hounded***, the debut of Figaro the cat in ***Figaro and Cleo***, and Disney's package feature ***Saludos Amigos***. WB releases its last black-and-white toon, ***Puss n' Booty*** (Frank Tashlin).

1948 | 70 Years Ago

Jay Ward Productions opens on West Hollywood's Sunset Strip. Kenzou Masaoka and Zenjiro Yamamoto found Japan Animated Films, the precursor of **Toei Animation**.



Melody Time

Musical anthology ***Melody Time*** is Disney's 10th feature.



The Little Orphan

MGM's ***The Little Orphan*** (dir. Bill Hanna and Joe Barbera) gets an early release, qualifying for and winning the 1949 Oscar. Sylvester speaks for the first time in Friz Freleng's ***I Taw a Putty Tat***. An unnamed **Marvin the Martian** debuts in Chuck Jones' ***Haredevil Hare***.



Marvin the Martian

1953 | 65 Years Ago



Peter Pan

The cinema spectacle of the year is **Peter Pan**, directed by Ham Luske, Clyde Geronimi and Wilfred Jackson. Disney also releases the first CinemaScope cartoon, Oscar winner **Toot, Whistle-Plunk and Boom**. Another nominee is Stephen Bosustow's terrifying **The Tell-Tale Heart**, first cartoon to get an X rating in the U.K.! WB releases its first stereo 3D toon **Lumber Jack-Rabbit** (Chuck Jones).



Release highlights also include the debuts of **Speedy Gonzales** (Robert McKimson's *Cat-Tails for Two*) and **Gumby** (Art Clokey's *Gumbasis*); the first UPA Cartoon Special **The Unicorn in the Garden** (Bill Hurtz), **Duck Amuck**, **Duck Dodgers in the 24 1/2 Century** and **Magoo's Masterpiece**.

Born this year are Aardman Animations co-founder **Peter Lord** (Nov. 4), multitalented Spümcø co-founder **Lynne Naylor** (Nov. 7), Pepper Ann creator **Sue Rose** (Aug. 16), Disney director **John Musker** (Nov. 8), Italian director **Enzo D'Alò** (Sept. 7) and Hungarian artist-animator **Dóra Keresztes** (Oct. 3).

1958 | 60 Years Ago



Knighty Knight Bugs arrives in theaters (the only Bugs Bunny cartoon to win an Oscar for Best Animated Short). **Sidney the Elephant** earns Terrytoons a nod for Art Bartsch's *Sidney's Family Tree*.

Cat Feud is the last WB toon made at "Termite Terrace."



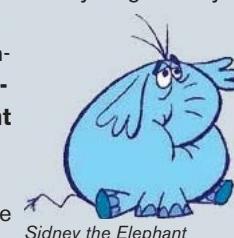
Yogi Bear

Hanna-Barbera's **The Huckleberry Hound Show** debuts in syndication, introducing a certain pic-a-nic basket thief named **Yogi Bear**, as does **Felix the Cat**.

Born this year are Aardman Animations co-founder and four-time Oscar winner **Nick Park** (Dec. 6), animator/producer/writer/voice actor **Alison Snowden** (April 4), *The Danish Poet* director **Torill Kove** (May 25) and voice actor **Maurice LaMarche**

Alison Snowden
(March 30).

Founded: **The Jim Henson Company** (U.S.), **Larry Harmon Pictures** (U.S.)



Sidney the Elephant



Nick Park



Torill Kove

1973 | 45 Years Ago

Charles Nichols and Iwao Takamoto direct Hanna-Barbera's E.B. White adaptation ***Charlotte's Web***. Wolfgang Reitherman helms Disney's ***Robin Hood***, and Ralph Bakshi releases his second not-for-kids feature, ***Heavy Traffic***. TV highlights

include Hanna-Barbera's ***Jeannie, Speed Buggy, Super Friends*** and ***Yogi's Gang***; Filmation's ***Lassie's Rescue Rangers***, ***Mission: Magic!, My Favorite Martians*** and ***Star Trek***. Ivor Wood helps FilmFair bring ***The Wombles*** to U.K. TV.

Born: Hit-maker/voice actor **Seth MacFarlane** (Oct. 26); anime directors **Ei Aoki** (Jan. 20), **Makoto Shinkai**; voice actresses **Tara Strong** (Feb. 12) and **Grey DeLisle** (Aug. 24); head of LAIKA **Travis Knight** (Sept. 13).

Founded: **Asahi Production** (Japan), **Doga Kobo** (Japan)

1978 | 40 Years Ago



Mickey Mouse becomes the first animated character to receive a star on the **Hollywood Walk of Fame**, for his 70th anniversary.

Movies include ***Watership Down*** (dir. Martin Rosen) and J.R.R. Tolkien take ***The Lord of the Rings*** (dir. Ralph Bakshi). TV shows include ***The All New Popeye Hour***, ***Crazy Legs Crane, Fangface***, the new ***Fantastic Four*** and ***The Godzilla Power Hour***.

The Academy recognizes the vfx team behind ***Superman***. Founded: **Ajia-do Animation Works** (Japan), **Artland** (Japan), **Cuckoo's Nest/Wang Film Productions** (Taiwan-U.S.), **King Rollo Films** (U.K.).

1983 | 35 Years Ago



The original ***Star Wars*** trilogy wraps with the critically lauded ***Return of the Jedi***, featuring Oscar-winning vfx by Richard Edlund, Dennis Muren, Ken Ralston and Phil Tippett. Disney releases ***The Many Adventures of Winnie the Pooh***.

On TV: U.K. viewers make way for Cosgrove-Hall's BAFTA and Emmy-winning ***The Wind in the Willows*** – and ***Bananaman***; U.S. auds get Jim Henson's ***Fraggle Rock***, ***Alvin and The Chipmunks***, ***Inspector Gadget***, ***Mister T*** and ***The Charlie Brown and Snoopy Show***, and half-hour toy commercials like ***G.I. Joe: A Real American Hero***, ***He-Man and the Masters of the Universe*** and ***The Pac-Man/Rubik the Amazing Cube Hour***. Spain's BRB and Japan's Nippon Animation team for ***Around the World with Willy Fog***.

Don Bluth reforms his studio as **Bluth Group**, providing animation for hit game ***Dragon's Lair***. Founded: **Disney Channel** (U.S.); **Polygon Pictures** (Japan), **Saban Entertainment** (U.S.-Israel), **Studio Fantasia** (Japan)



Star Trek



Watership Down

1988 | 30 Years Ago

It's a bonanza year for influential anime: Isao Takahata's ***Grave of the Fireflies*** and Hayao Miyazaki's ***My Neighbor Totoro*** from Studio Ghibli, Kazuyoshi Katayama's ***Appleseed*** and Katsuhiro Otomo's hugely influential manga adaptation ***Akira*** arrive. Stateside, Bob Hoskins uncovers a Toon Town mystery in quadruple Oscar winner ***Who Framed Roger Rabbit*** (animation directed by Richard Williams); George Scribner puts a musical twist on Dickens in ***Oliver & Company***; and Don Bluth takes us to ***The Land Before Time***.

Other noteworthy releases: John Lasseter's Oscar-winning ***Tin Toy***, Cordell Baker's ***The Cat Came Back***, Joanna Quinn's first short ***Girls Night Out***, Will Vinton's ***Meet the Raisins!*** TV special, BBC miniseries ***The Lion, the Witch & the Wardrobe*** (animation dir. by Jimmy Murakami). Plus, toon spin-off series like ***Police Academy, ALF Tales, A Pup Named Scooby-Doo***, "new adventures" of ***Winnie the Pooh, Beany & Cecil, Yogi Bear, The Adventures of Raggedy Ann & Andy, Denver the Last Dinosaur, Garfield & Friends*** and ***This Is America, Charlie Brown***.

Founded: **Nick Jr.** (U.S.); **A. Film Production** (Denmark), **Collingwood O'Hare** (U.K., now Hit Ent's Collingwood & Co.), **Disneytoon Studios** (U.S.), **Mac Guff Ligne** (France, acquired by Illumination Ent.), **Mondo Media** (U.S.), **Pilot Studio** (Russia), **Studio B Productions** (Canada, now DHX Studios Vancouver), **Varga Studio** (Hungary)

1993 | 25 Years Ago



A goth holiday icon is born on the big screen with ***Tim Burton's The Nightmare Before Christmas*** (dir. Henry Selick). Richard Williams' ***The Thief and the Cobbler*** sees the light after a record 31-year, on-off production (Vincent Price's last feature release). Auds also get ***Tom and Jerry: The Movie***, and Japan sees ***Ninja Scroll, VeggieTales*** is the first direct-to-video CG series.

Nick Park's ***The Wrong Trousers*** (Aardman Animations) wins an Oscar. U.K. animation offers more gems: ***The World of Peter Rabbit and Friends*** (TVC), which comes to the U.S. this year, and ***The Animals of Farthing Wood*** (Telemagination/La Fabrique), commissioned by the European Broadcast Union. ***The Adventures of Blinky Bill*** airs in Australia. The second-longest-running anime of all time ***Nintama Rantaro*** debuts in Japan, as does Studio Ghibli's TV movie ***Ocean Waves, Sailor Moon R*** and its first feature. U.S. TV welcomes ***Animaniacs, Rocko's Modern Life, Madeline, Biker Mice from Mars, Bonkers, Sonic the Hedgehog*** and Mike Judge's ***Beavis & Butt-head***, to name a few.

The earthshaking vfx of ***Jurassic Park*** earn an Oscar. Founded: **Women in Animation** (U.S.); **Adeiaide Productions** (U.S., part of Sony), **Curious Pictures** (U.S.), **Digital Domain** (U.S.), **Digital eMation** (S. Korea), **Janimation** (U.S.), **Hal Film Maker** (Japan, later TYO Animation), reformed **MGM Animation** (U.S.), **Toon City** (Philippines), **Weta Digital** (New Zealand).



Dragon's Lair



My Neighbor Totoro



1998 | 20 Years Ago

DreamWorks releases its first movie ***Antz***, followed the same year by ***The Prince of Egypt*** (the first major studio toon with a female director: Brenda Chapman); Disney debuts ***Mulan***; Nickelodeon has ***The Rugrats Movie***; and Warner Bros. offers ***Quest for Camelot***. Plus, there's tons of direct-to-video sequels and one-offs.

Frederator Studios launches its first showcase series on Nickelodeon: ***Oh Yeah! Cartoons***, created by Fred Seibert. The show introduces toons like ChalkZone and *The Fairly OddParents*. U.S. TV also gets ***CatDog***, ***Celebrity Deathmatch***, ***Histeria!***, the original ***Powerpuff Girls***, ***The Wild Thornberrys*** and the first CG preschool series

Rolie Polie Olie. Nelvana's ***Bob and Margaret*** – created by Alison Snowden & David Fine after their Oscar-winning short *Bob's Birthday* – debuts. Keith Chapman's ***Bob the Builder*** and Xilam's ***Oggy & the Cockroaches*** arrive in the U.K. and France, respectively.

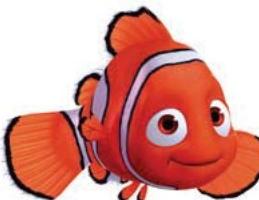
On the shorts scene: Chris Wedge's ***Bunny*** hops toward Oscar gold; Sylvain Chomet's ***The Old Lady and the Pigeons*** wins the year's César; and Don Hertzfeldt builds his reputation with his UCSB graduate film ***Billy's Balloon***, which wins 33 awards.

Founded: **BONES** (Japan), **Double Negative** (U.K.), **Little Airplane Prod.** (U.S.), **Look Effects** (U.S.), **Method Studios** (U.S.), **Sav! The World Prod.** (France), **SynergySP** (Japan), **ZEXCS** (Japan); **Animated Dreams** festival (Estonia)



Powerpuff Girls

2003 | 15 Years Ago



Finding Nemo

Pixar nets its first feature Oscar with ***Finding Nemo***. Disney releases ***Brother Bear***. Warner Bros. Feature Animation's last hurrah is ***Looney Tunes: Back in Action***. Young trainers in Japan flock to ***Pokémon: The First Movie***. Other international cinema highlights: Sylvain Chomet's ***The Triplets of Belleville*** (France), Satoshi Kon's ***Tokyo Godfathers*** (Japan), Melnitsa Studio's first feature ***Little Longnose*** (Russia), Kim Moon-saeng's ***Sky Blue*** (S. Korea), José Pozo's ***El Cid: The Legend*** (Spain), Philippe Leclerc's ***Rain Children*** (France), Derek Hayes' hybrid fantasy ***Otherworld*** (Wales) and global collaboration ***Winter Days*** (Japan). TV highlights: Klasky-Csupo's ***All Grown Up!, Duck Dodgers, The Grim Adventures of Billy & Mandy, Moose & Zee, Star Wars: Clone Wars, Teen Titans, Teenage Mutant Ninja Turtles*** and ***Xiaolin Showdown***, John K's ***Ren & Stimpy: Adult Party Cartoon***, Stan Lee's ***Striperella*** and Adult Swim's ***The Venture Bros.***

Shorts highlights: Adam Elliot's Oscar winner ***Harvie Krumpet***, nominees ***Boundin'*** (Bud Luckey), ***Gone Nutty*** (Carlos Saldanha & John Donkin) and the long-awaited Disney-Dali collaboration ***Destino***.

Lord of the Rings: The Return of the King earns a vfx Oscar.

Founded: **Animation Collective** (U.S.), **Estudio Haini** (Mexico), **Lucasfilm Animation**, **Nitrogen Studios** (Canada), **Nomad** (Japan), **Petersburg Animation Studio** (Russia), **Rooster Teeth Prod.** (U.S.); **Animateka** festival (Slovenia), **The Animation Show** (U.S.), **Hamburg Animation Award**

2008 | 10 Years Ago

TV Academy gives the first **Creative Arts Primetime Emmy Award** for short-form animated program to *Camp Lazlo*. The Daytime Emmy for directing

in animation is also introduced.

Disney-Pixar's Oscar winner ***WALL-E*** (Andrew Stanton), DreamWorks' ***Kung Fu Panda*** (John Wayne Stevenson & Mark Osborne), Disney's ***Bolt*** (Chris Williams & Byron Howard), Blue Sky's ***Horton Hears a Who!*** (Jimmy Hayward & Steve Martino), ***The Tale of Despereaux, Madagascar: Escape 2 Africa, Open Season 2, Igor*** and ***Space Chimps*** are some of the big domestic releases. There's buzz about international titles ***Ponyo*** from Hayao Miyazaki (Japan), ***Fly Me to the Moon*** (Belgium), Euro co-pro ***The Flight Before Christmas, Goat Story*** (Czech Rep.), Gabor Csupsó's ***Immigrants*** (Hungary), ***Mia and the Migoo*** (France) and ***The Missing Lynx*** (Spain). Indie feature gems include Tatia Rosenthal's **\$9.99**, Bill Plympton's ***Idiots and Angels***, Nina Paley's ***Sita Sings the Blues*** and Ari Folman's ***Waltz with Bashir***. New to TV: ***Star Wars: The Clone Wars, Batman: The Brave and the Bold, The Mighty B!, The Marvelous Misadventures of Flapjack, Random! Cartoons, The Penguins of Madagascar, Ben 10: Alien Force, Sid the Science Kid*** (U.S.); ***Chuggington*** (U.K.), ***Chhota Bheem*** (India), ***Wakfu*** (France), ***Martha Speaks, Kid vs. Kat*** (Canada).



\$9.99

On disc, ***Futurama: Bender's Game*** and ***The Beast with a Billion Backs*** help get the show back on TV; Lauren Montgomery directs WB's ***Wonder Woman***; DisneyToons offers ***Tinker Bell***; Toshi Hiruma and Bruce Timm team up for the ***Batman: Gotham Knight*** anthology; WB issues ***Justice League: The New Frontier***; and Film Roman delivers video-game prequel ***Dead Space: Downfall*** for EA.

Kunio Katou's ***La Maison en Petits Cubes*** is the year's Oscar-winning short. The vfx Oscar goes to ***The Curious Case of Benjamin Button***.

Founded: **8-Bit** (Japan), **Animaccord** (Russia), **GoHands** (Japan), **Khara-beesh** (Jordan), **Kinema citrus** (Japan), **Lumicel** (India), **Marvel Animation** (U.S.), **ToonBox Entertainment** (Canada); **Animasyros** festival (Greece), **Animator Festival** (Poland), **Fest An a** (Slovakia)

2013 | 5 Years Ago

The first Int'l Emmy Kids Awards are held in Cannes – ***The Amazing World of Gumball*** takes the toon prize.

Jennifer Lee and Chris Buck direct Disney's Oscar-winning, box-office record-setter ***Frozen***; its theater competition includes Pixar's ***Monsters University*** (Dan Scanlon), DreamWorks Animation's ***The Croods*** (Chris Sanders & Kirk DeMicco) and ***Turbo*** (David Soren), Blue Sky's ***Epic***, Sony Pictures Animation's ***Cloudy with a Chance of Meatballs 2***, Illumination Ent.'s ***Despicable Me 2***, Reel FX's ***Free Birds***, Rainmaker's ***Escape from Steven Universe***

Planet Earth and DisneyToons' ***Planes***. On TV, Fox launches the now-defunct ***Animation Domination High-Def*** block. Longer-lasting debuts include Rebecca Sugar's groundbreaking ***Steven Universe***, ***Teen Titans Go!, Mickey Mouse, Rick and Morty, Uncle Grandpa, Wander Over Yonder, Turbo FAST and Sanjay and Craig, Avengers Assemble, Mr. Pickles, Peg + Cat, PAW Patrol*** and Hulu original ***The Awesomes***. International selections include ***Sarah & Duck*** (U.K.), ***Rocket Monkeys, Camp Lakebottom*** (Canada), ***Sendokai Champions*** (Spain), ***The Jungle Bunch, Rabbids Invasion*** (France), ***Attack on Titan*** (Japan) and ***Angry Birds Toons*** (online).

Mr. Hublot by Laurent Witz & Alexandre Espigares wins the Best Animated Short Oscar, ***Gravity*** wins the vfx Oscar. Founded: **Assemblage Entertainment** (India), **Lay-duce** (Japan), **Light Chaser Animation Studios** (China), **Troyca** (Japan), **Warner Animation Group** (U.S.) ♦

How to Produce and Distribute Your First Animated Feature — At Any Cost

Part 3 of 3

Teasers and Trailers

As you are putting the finishing touches on your feature, you'll need to build momentum by cutting a few different teasers. A teaser is an interesting, attention-getting snippet of your film that doesn't necessarily tell a full story. A good teaser will often leave the viewer with more questions than it answers. If the viewer watches your teaser and is left with a "What the? I need to find out more about this!" feeling, then you've done your job. Teasers are efficient, powerful tools because they are short, relatively easy to put together, and you can start populating social media outlets to grow interest well before completion of the film.

A trailer, on the other hand, is a much more polished, complete story that tells the viewer everything you want them to know about your film. (Spoilers not included, naturally.) A good trailer will showcase some of the most impressive and interesting aspects of your film, whether it's a signature action scene, celebrity involvement, something shocking or a powerful cliffhanger.

Utilize your teasers and trailers by saturating all social media outlets with them. The major video and social media sites are invaluable for spreading the word about your film and are for the most part free to use. However, you can also set up pay-per-click accounts that practically guarantee people will watch them in large numbers, budget-allowing.

Film Website

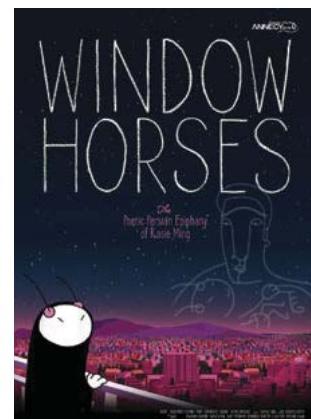
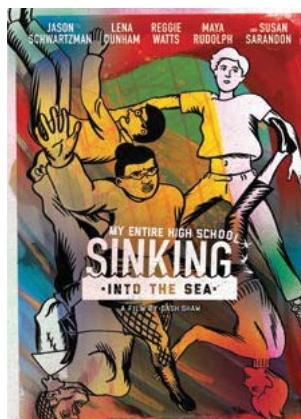
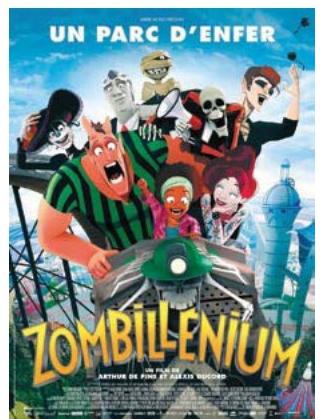
You will need a website, preferably named exactly as the title of your film. If your film has a very long title, create a shorter, easier to remember one for your WWW address. This helps with branding and makes it infinitely easier to find.

Your website will be command central, so to speak. It will contain your teasers, trailers, notes about the film, news updates, contact information and a store. In your store, you can sell a wide variety of swag - from t-shirts to mugs to calen-

dars to mouse pads and even DVDs of your film. Despite the enormity of gloom and doom that has been spread recently touting the end of hard copies of movies forever, digital and streaming revenue generated approximately \$6 billion in sales vs. DVD sales and rentals of \$12 billion in 2016. Hardly the end of DVDs as we know it. Plus, DVDs come in handy when doing promotions and in-person giveaways.

Do-It-Yourself Digital Distribution

Sharing your work is great, but making royalties from your work is even better. There is a wonderful list of 20 do-it-yourself digital distribution plat-



It's Not Impossible: The dedicated filmmakers behind *Zombillennium*, *My Entire High School Sinking into the Sea* and *Window Horses* have reaped the fruits of their labor: successful films telling unique stories.

forms available among the resources at pbs.org/pov/filmmakers that makes the concept of giving complete ownership and control of your labor of love to a traditional distributor, not to mention a lion's share of the profit, kind of silly. If you want to maximize your do-it-yourself digital distribution and subsequent revenue, mastering each and every one of these platforms is key.

Film Festivals?

With very few exceptions, spending significant time, money and energy on the film festival "circuit" is more often than not a fruitless endeavor that does little more than help you meet other independent (i.e., struggling) filmmakers. Unless you get accepted into the top three or four film festivals, your resources would be better utilized elsewhere.

Getting the Word Out

Spreading the word about your brand new movie via social media is a given. You'll need to cash in all favors, post multiple announcements, send event invitations, and get all your online friends onboard to create a large enough promotional blitz to generate significant interest in your film.

In the climate of smartphone addiction and internet dependency, the tendency is to forgo traditional means. However, spreading the word in a more traditional sense can be extremely powerful and should not be neglected. Get on the phone and call all of your friends, family and colleagues. Contact a local cable TV station or public access

channel and see if they will play your movie or at least show your trailer. Make fliers and post them around town (where legal), visit college campuses and hang posters at student centers. Post ads in local publications and newspapers. Host several in-person DVD giveaways. Call radio stations, both commercial and college, to see if you can do an on-air promotion, interview or give-

away. Contact every local business possible and politely ask if they would be willing to sell your DVDs if you give them half of all sales.

Many of the most successful movies of all time (not to mention rock bands) started as independent projects and grew exponentially from grassroots marketing and promotional efforts. Multiply this by the power of social media, and in time your film will be seen by the masses. How quickly and on what scale is entirely up to you. ♦

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Life Smartphone
by Chenglin Xie



Beautiful Beginnings

Bold ideas shine at the 2017 Student Academy Awards.

By Ellen Wolff

The Academy of Motion Picture Arts and Sciences has a notable history of honoring student filmmakers with medals for their thesis films. That honor roll includes directors John Lasseter, Pete Docter, Robert Zemeckis and Spike Lee, so Academy members understandably see glimpses of promising futures for student winners.

This year's honors, which were presented by the Academy in October in Beverly Hills, were chosen out of 1,587 submissions by 356 film schools. What made the animation honorees particularly intriguing were the thoroughly modern movies these students created, exploring themes of same-sex adolescent attraction, the struggles of a gravely wounded war vet, and the impacts of modern technology on our lives.

Life Smartphone, a wry look at the mishaps that befall people glued to their devices, was completely hand-animated by Chenglin Xie, formerly from China Central

Academy of Fine Arts. He earned the sole Gold Medal for animation from an international film school, and he is now a student at the USC School of Cinematic Arts. *Life Smartphone* was also officially selected by over 50 international festivals and was nominated for Sundance's Grand Jury Prize.

Chenglin actually credits his father for the film's inspiration. "My father told me many times that a person who studies art should pay more attention to their surroundings rather than their smartphone screen. After I shut down my phone I found people around me were always

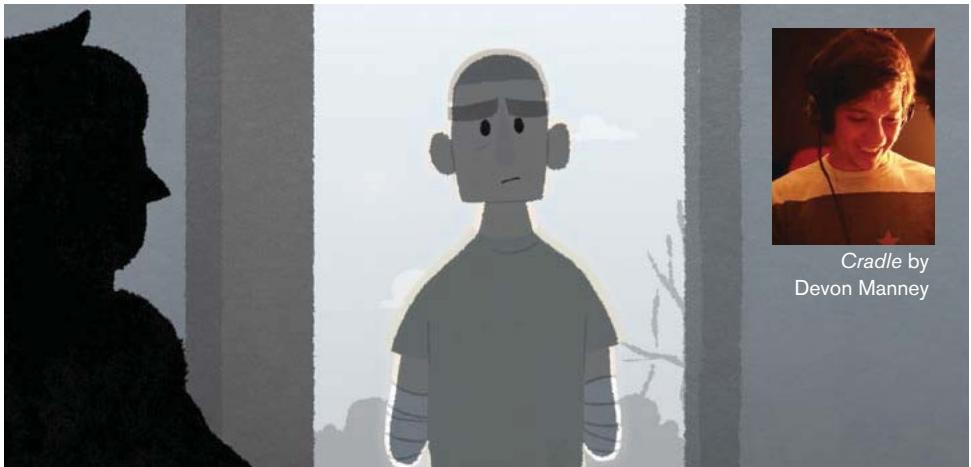
playing with theirs, including my father! So I did some research and found many people get hurt doing that, so I decided to make a film to try and talk about this phenomenon."

His darkly funny film unfolds in a side-scrolling manner, which mirrors the side-swiping motion people use with many smartphone apps. However, Chenglin credits more traditional filmmakers with fueling his desire to direct films, including Steven Spielberg and George Lucas (whose images grace his Facebook page). "They've influenced me to use a visual language to tell stories. When I face

problems I do not know how to solve, I watch their movies to get inspired." But don't expect him to give up modern technology, despite the cautionary tale of *Life Smartphone*. Asked if he expected to take selfies during the Student Academy Awards events, he admitted, "I think I will!"



E-delivery by
Young Gul Cho



Inspired by Technology

Technology's impact was also the theme of *E-delivery*, the national Bronze Medal winner animated by Young Gul Cho, who recently completed the M.F.A. program at New York's School of Visual Arts. Her 3D CG film depicts robots that churn out designer babies. As Cho explains, "The idea is that as artificial intelligence keeps developing, it might finally come to the area of making babies by following the customers' orders." *E-delivery* clearly makes an analogy to single-cup coffee makers, with each baby's characteristics chosen from a menu of choices. "When people see my film, they just laugh. It can be humorous and horrifying at the same time."

Among the influences Cho says inspired her to depict a future of machine dominance was Dada artist Raoul Hausmann's 1919 piece *Mechanical Head (The Spirit of Our Time)*. Though Cho uses no dialogue, *E-delivery* makes it clear what is going on, as her beautifully lit and detailed machines assemble the humans of the future. "That realism is exactly what I wanted," she says. Especially notable is that her sophisticated computer animation was created completely by Cho over six months' time.

After seeing this film, it's not surprising that the visual effects powerhouse Framestore offered her an internship. But she is also skilled in

2D motion graphics, and has worked as a freelancer for Nickelodeon. "I'm interested in both 2D and 3D," she says, adding that her goal is learning to work with other team members.

Misfortunes of War

It's actually a hallmark of this year's Student Academy Award-winning films that the animation was done almost exclusively by the honorees themselves. Silver Medalist Devon Manney did enlist some of his fellow USC students to handle color and background work on his hand-animated film *Cradle*, which runs over 14 minutes long. He was able to pay those artists, as well as Juilliard-trained composer Saad Haddad, with funds raised through Kickstarter and a grant from the Sloan Film Program.

Cradle explores the heartbreak trials of a war veteran who lost both of his lower arms while fighting in Iraq. Manney explains, "I don't have first-hand knowledge of anybody like this character, but I grew up in the post-9/11 period and I wanted to try and understand it more." Especially poignant is the excruciating phantom limb pain that his main character endures, which Manney viewed as a profound metaphor. "It's still misunderstood," he points out. "You see amputees in the media sometimes, but their phantom pain never comes up."

Manney believes that the animation medium

enabled him to portray this vet's plight more directly than live action would. "That would be a lot harder because of the suspension of disbelief that you'd have to break down, which really doesn't exist in animation." Still, it took two years to develop *Cradle*, and Manney credits the support of USC professor Sheila Sofian (a Student Academy Award medalist herself). "What kept me going was the hope that people will look at it and feel an emotional connection. I want to use animation to tell stories that no one else has done. This medium has only been in existence for about a century, so there are so many things that *no one* has done."

Embracing Diversity

That's also a pretty apt description for this year's Gold Medal-winning film, *In a Heartbeat*. The CG-animated film follows the adventures of a closeted adolescent boy whose heart literally drags him towards another boy he's pining for. Co-created by Beth David and Esteban Bravo at the Ringling College of Art and Design, *In a Heartbeat* is that rare graduation film that became a viral sensation within days of being posted on YouTube. Its sweet portrayal of the two boys discovering their mutual attraction even prompted a supportive tweet from LGBTQ champion Ellen DeGeneres, and the Human Rights Campaign posted a link to the film.

All of which left David and Bravo amazed. The pair first got an inkling of the impact their film would have when they posted an animatic on Kickstarter to raise the funds that paid composer Arturo Cardelús. Their goal was \$3,000, but they raised \$14,000. "That was a moment of: Wow. We've got something here. Hopefully we won't screw it up!" recalls David.

Bravo credits Ringling classmate Hannah Lee for the idea of a boy whose heart pops out of his chest to chase down a girl that he likes. "I was reluctant because I thought I didn't have anything new to say. Then Beth and I asked ourselves, 'What if these people were the same gender?' It was something we were able to relate to that we thought wasn't being done in animation."

The pair shared the animation duties equally, often finishing each other's drawings. They hope to collaborate again, although for now David is working on JibJab's *StoryBots*, and Bravo is a story artist at Blue Sky Studios. As David notes, "Working together on a project like this was helpful in understanding how the industry functions ... if only on a small scale!" ♦



In a Heartbeat by
Esteban Bravo &
Beth David

Student Academy Award winners automatically qualify for Oscar consideration. Learn more at www.oscars.org/saa.



Thunderstruck Visuals

Creating the dazzling visual effects for *Thor: Ragnarok* required a superhuman eye for detail and exceptional attention to the actors' gestures. By Trevor Hogg

Things never get any easier for Marvel Studios vfx supervisor Jake Morrison. This past year, the industry veteran worked with lead vendor Framestore along with 17 other companies – including Method Studios, Rising Sun Pictures, ILM, Double Negative, Digital Domain and Iloura – to produce 2,700 shots for a cosmic road trip undertaken by an Asgardian prince and his green giant friend in *Thor: Ragnarok*.

"We go everywhere and see everything. It's bonkers!" laughs Morrison. "It's not like working with Captain America and, to some degree,

with Spidey, where there are a certain number of rules because Cap and Peter Parker are flesh and blood. You don't have any of that in the *Thor* universe because your main character is a god. Then you've got the Hulk, who is like an atom

bomb wandering around on two legs. What you can do with the story is almost unlimited."

One of the most daunting aspects of the project was the Hulk having to deliver comedic lines. "He is not delivering Shakespeare," notes Morrison. "It's relatively monosyllabic stuff, but highly expressive and charming. We went back to first

'It's not like working with Captain America and Spidey where there are certain number of rules because Cap and Peter Parker are flesh and blood. You don't have any of that in the Thor universe because your main character is a god!'

– Jake Morrison, vfx supervisor

principles with Ryan Meinerding [head of the visual development at Marvel] who had done all of the initials and ZBrush sculpt for the Hulk in *The Avengers*."

"We did a Medusa pass, which is like a live

facial scan [without using traditional motion-capture dots] with Mark Ruffalo and plugged his performance into the Hulk 101 rig," he continues. "The difference from that to once we had re-sculpted the Hulk completely and given him the ability to make different mouth shapes and nuances was amazing. There are some scenes in

there where the animation team at ILM Vancouver, which did the redesign and rebuild, had a field day and it shows. You literally see the Hulk having a tantrum like a four-year old. He's pumping his fists into the ground as he wanders off. It's funny stuff!"

Then there is the matter of director Taika Waititi (*Hunt for the Wilderpeople*) deciding to portray a CG rock-alien known as a Kronan, which appeared briefly in the beginning of *Thor: The Dark World*. "During the course of the shooting, there



The Blanchett Effect: The vfx team built all the mo-cap technology into the actual sets where Cate Blanchett (Hela) was performing and sewed interactive tracking markers into her costume.



was a new character called Korg," explains Morrison. "He became more likeable and interesting as the storyboard panels came in. Taika, who usually has a cameo in all of his films, said, 'I want to put on the mocap suit and be Korg.' Now you've got the director directing himself acting as a fully motion-capture character on set, literally adlibbing with Chris Hemsworth!" (Waititi played three characters in the film, at least partially.)

Keep 'em Laughing

Just like the Hulk, Korg had to be able to deliver funny lines. "Rocks can't deform or squash or stretch because otherwise it is going to look like latex," notes Morrison. "The challenge was to create a new technical rigging system able to do a 1:1 mapping of Taika's performance of Korg and that allowed for the smallest amount of squash and stretch. If Korg flexes his arm, you have to make sure that the rocks can't get bigger. What you have to do is rearrange the layer of existing rocks to create volume inside and give the illusion that the thing has actually flexed."

"We do have improv scenes where Chris Hemsworth is adlibbing with Mark Ruffalo as Hulk delivering dialogue in real time in the camera," remarks Morrison. "We had it mapped so we would make ad hoc motion-capture volume on set so the camera operator would get a feed piped back into the eyepiece of the Alexa 65 camera that they're shooting with. The operator could look at Hemsworth and tilt the camera up to frame the superimposed Hulk over where Ruffalo was. Once we got to doing Korg it was really crazy. Then as we got into post, Taika discovered the power of mocap ADR where he can now go, 'In series two my dialogue was a little bit



funnier than in series three, but Chris' reaction is better in three! I told him you can stitch them together and all of a sudden he had this freedom to craft with the characters the funniest version of the scene."

One of the film's highlights is an epic gladiator battle between Thor and the Hulk. "I was racking my brains to come up with how you would choreograph a fight with a real 8'6" and 6'4" person," reveals Morrison. "I hit upon an idea about doing it in reverse. What if that 6'4" person is the Hulk? How big does that make Thor? The answer is 4'8". I said to stunt coordinator Ben Cooke, 'Do you know someone who is a good stunt player who is a bit shorter?' That's when we got the amazing Paul Lowe, who is like a scaled version of Chris. We had done storyboards so were able to choreograph the entire fight using a 4'8" Thor and 6'4" Hulk ... When you take the Hulk version of the mo-cap and take the blue-screen version of Chris' stuff and put the whole thing together, it fit together like a jigsaw puzzle. The moves are absolutely 1:1."

Don't Mess with Hela
Sibling rivalry goes beyond Thor and Loki (Tom

Hiddleston) as their ruthless sister Hela (Cate Blanchett) escapes imprisonment and plans to expand the empire by commanding an army of the dead. "Her powers are insane," observes Morrison. "She's able to conjure weapons from thin air. Hela is a supervillain who has flare and panache, and has a multi-Oscar-winning actress playing her. The main thing we wanted with that was to be absolutely true

to Cate. If she walks, tips her head and gestures with her hand a certain way, all of that had to be honored when it went through the technical process. What you get on the screen with Hela is Cate's performance magnified through the lens of the outfit that she's wearing."

To achieve the high level of authenticity, custom-made active markers were embedded in the motion-capture suit worn by Blanchett. As Morrison explains, "One of the weirdest things is that you have a CG character wearing this massive headpiece the entire time, and yet she has to be able to move around freely, execute hundreds of people, and do all of this without you questioning the fact. You have Cate standing there pleased as punch with six-foot-wide antlers on her head in full supervillain mode. In dailies, the studio would be finalizing shots with Taika, and we would literally park on a shot and go, 'This movie is insane!' ◆

Disney released Marvel's *Thor: Ragnarok* last month in the U.S. and other key territories. The movie grossed over \$502 million at the global box office worldwide in its first week.



Creating a Fish Man from the '50s

Visual effects master Dennis Berardi discusses the stunning effects of Guillermo del Toro's *The Shape of Water*.
By Karen Idelson

There are few directors who've loved monsters, creatures and ghosts in the way that Guillermo del Toro has loved them. As an auteur and cinephile himself, the Mexican helmer's vision of these beings has carried on a legacy that stretches back as far as the history of film. With his latest release, *The Shape of Water*, del Toro gives us his own fascinating take on a kind of "fish man" who became popular in the 1950s and 1960s, with the help of Dennis Berardi, vfx supervisor and CEO of the elite effects house Mr. X.

Berardi and the director became friends after working on a half-dozen projects with one another. And del Toro hinted at what he had in mind during one of their talks. "Guillermo and I did *Crimson Peak* together and that was an entire year of our lives together," recalls Berardi. "While we were working, he said he was toying with an idea for a film. Then he sent me the script and I was absolutely blown away,

because the leading man had to do things that I thought were beyond what an actor in a special effects makeup suit could do," says Berardi. "He had to emote, he had to swim, he had special bioluminescent power, he had to exhibit unique properties like healing, and there was lots of screen time."

Because the director had something very special in mind, he knew finances would be tight. During a live Facebook appearance, del

Toro said his budget for the film was \$19.5 million and that getting what he wanted on screen for that number was an exhausting journey that made him lose sleep and gain weight.

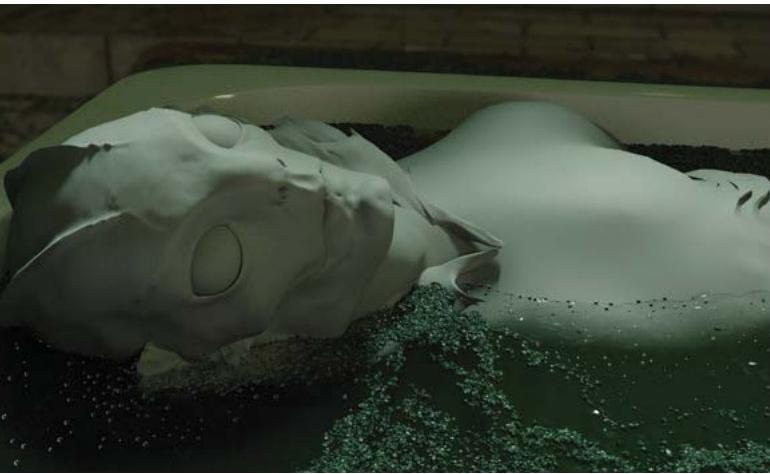
While Berardi and del Toro talked about the creature they would make together, they started to call him "Charlie" as an affectionate nickname, and soon this being would come to take over all their discussions. "With Guillermo very early on he told me he wanted us to be able to

make Charlie a full-frame, digitally animated character without compromise, whenever he asked for it," says Berardi. "So, he needed to be able to have Doug Jones [the actor who played Charlie] in a suit and then cut next to a digital version of the character and have them exactly match shot to shot and in close up, and that was really rough."

Berardi was excited by the challenge but immediately realized there were times when matching footage of the actor in



Fish Man: Actor Doug Jones, a veteran of del Toro's *Pan's Labyrinth* and *Hellboy* movies, portrayed Charlie in a special suit.



the creature suit to a digitally rendered version of Charlie would be beyond most of what he'd done in his career.

"[Doug Jones] is a master performer at this stuff," says Berardi. "As soon as he put on the suit he became this cross between a Matador and the Silver Surfer, which is just what Guillermo wanted."

The phenomenal suit made by celebrated creature designer Mike Hill gave Jones an incredible tool, but Jones and del Toro wanted more subtle facial expressions in order to draw the audience into the actor's performance. Luckily, Berardi had his own proprietary tool for just this kind of work.

Using the X Scan rig, Berardi captured all of the actor's poses in the creature suit and then again without the suit. Over the course of eight full scanning sessions, they focused closely on not just his body but also his face.

"After the scans, we mapped Doug's performances as a real human onto the digital creature," says Berardi. "Guillermo was very interested in that process. It was something we called facial rigging. And Guillermo would make notes on the technology and it paid huge dividends. He would say, 'I like the brow furrow at level two.' He would work with the animators personally. He was here so often that we got him a parking space."

All the technologies came together to make delicate performances possible. In one scene, Charlie encounters a cat, hisses at it and flares his gills. (The cat, of course, hisses back.) In the close-up, they kept the creature's body but replaced his entire head with a rendered and composited version of the face that included the actor's performance mapped onto the dig-

ital version of Charlie's face.

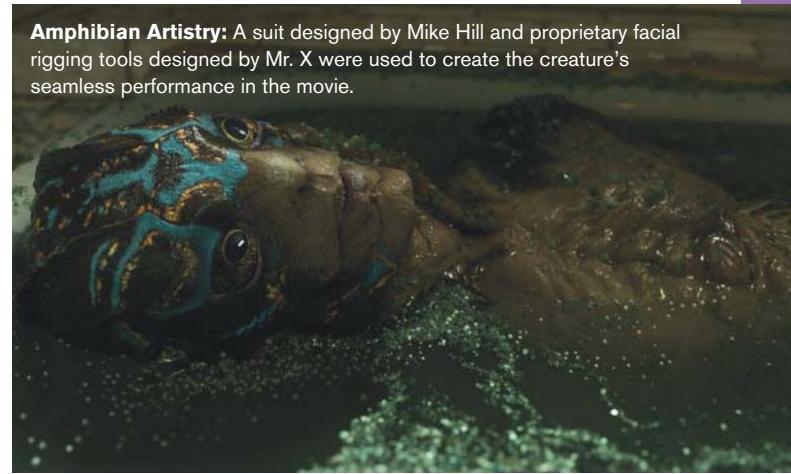
Shooting Dry for Wet

Berardi soon understood after extensive talks about how Charlie would appear on screen that there was a lot of water work in the story, and that the water would have to act as a player in the film, too.

"The opening shot of the film, which was two minutes long, is entirely in a water environment," says Berardi. "We had shot reference in Georgian Bay, north of Toronto, because I'm a big believer in reference. We got an underwater photographer and we had him swim through various rocky underwater areas and got beautiful work."

The reference work helped them get a sense of what they wanted but ultimately, del Toro wanted greater control over the look and

Amphibian Artistry: A suit designed by Mike Hill and proprietary facial rigging tools designed by Mr. X were used to create the creature's seamless performance in the movie.



surrounds him is digital.

Putting together such extensive water work wasn't new for Mr. X, since they'd already done lots of it on shows like *Vikings*, but the detail of it was unique. Berardi soon pulled together his Houdini effects team and reached out to the team at SideFX (makers of Houdini) to create something new for the film. Mr. X also had proprietary in-house tools.

A Lengthy Post for Charlie

After filling their toolbox with the most powerful things they could find, the team inched through the scenes and made choices on a shot-by-shot basis about what to use. The director was interested in the entire process and joined the crew in casting which animators would work on specific scenes. Many of the most complex water scenes took eight to 15 hours to render

just one frame.

"Normally on a feature you have 20 to 26 weeks to do all the post-production work, but we couldn't have made this film on that schedule," says Berardi. "Luckily we had longer. We had 45 weeks in post, and we had a crew of over 200 people working on the



'If you know anything about Guillermo, you know he's an animator at heart. He wanted the fish to swim by in a certain way and things to move in particular way, and even the bubbles had to move in time with the music the way he wanted.'

– Dennis Berardi, vfx supervisor

feel of how the water would move and act as a character in the film.

"If you know anything about Guillermo, you know he's an animator at heart," says Berardi. "So we ended up animating everything in that sequence. He loves performance and he choreographs everything. He wanted the fish to swim by in a certain way and things to move in particular way, and even the bubbles had to move in time with the music the way he wanted."

There were also so many smaller moments where digital water came into play. Any time you see Charlie in the capsule used to transport him throughout the movie, the water that

film at Mr. X for the entire duration of the show, and we just barely made it. I think we delivered our final shot on the day before Guillermo jumped on a plane to screen the film at the Venice Film Festival."

Now that it's done, Berardi is happy to look back on his time with Charlie submerged in digital water. "During shooting you're always exhausted or borderline exhausted, and then in post-production you get redemption, because you see the fruits of your labor," he says. ♦

Fox Searchlight releases *The Shape of Water* in theaters on December 8.

How to Create a Super Pig (and Other Secrets)

Method Studios' Erik De Boer looks back at the making of *Okja*.

By Ramin Zahed

As we look back at all the amazing envelope-pushing vfx work of the past year, it's important to remember the work of Erik de Boer and his team at Method Studios on director Bong Joon-Ho's genre-defying feature *Okja* – Especially on the gigantic, genetically engineered super-pig of the movie who stole hearts and dazzled viewers. De Boer, who won an Oscar for his work on *Life of Pi* in 2013, discussed the film's impressive visuals in a recent interview.

"One of the film's most challenging parts was that we had to convince the viewer that this huge, weird looking hybrid super-pig Okja and this young girl Mija really lived together in the Korean countryside and that they had a close, affectionate relationship," says de Boer. "Despite this being a fantasy creature, we were aiming for a completely photorealistic presence."

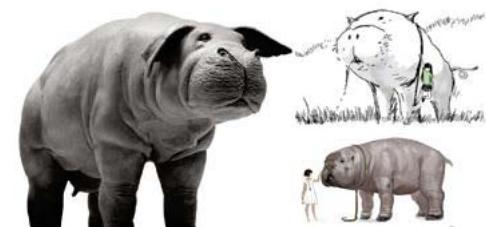
The vfx work, which included 300 Okja creature shots (550 overall), required 16 months of prep work and seven months of post-production. Method Studios was the film's lead primary effects studio, with 4th Creative Party in Korea also pitching in to help.

For de Boer and his team, making *Okja* proved to be a fantastic adventure. "We travelled to the most beautiful locations in South-Korea, New York (Wall Street) and Vancouver," he tells us. "Each sequence had its own unique visual challenge, but shooting and creating the vfx for the underground shopping mall/traffic tunnel was probably some of the most fun we had. It involved location and stage days, some digi-double and greenscreen, and great stunt and sfx work. The CG team at Method Vancouver did a fantastic job bringing all this together in an action-packed 'crash and run' sequence through Seoul!"

He also praises the film's director for giving them an amazing challenge, which required very subtle, tender contact but also a lot of shoving and pushing with multiple cast members touching the CG creature at the same time. "This required careful planning and the creation of many unique props," he points out. "Method animation supervisor Steve Clee rehearsed each setup with actress Ahn Seo-Hyun so that we would come to set fully prepared and ready to allow for surprises and improvisations. That relationship was very important, as it allowed Mija to fully connect with the foam props. She really delivered an amazing performance. The artists at Method then took their art to the next level by creating completely believable physicality, interaction and photographic integration."

Falling into The Abyss

Looking back at his early days in the business, de Boer says he was hugely inspired by James Cameron's *The Abyss*. "I was a generalist pumping out commercials in London," he remembers. "I was doing dancing pieces of salami, jumping snowmen and morphing cars. And here comes this fantastic movie with a fully integrated CG creature and not only does Lindsey (Mary Elizabeth Mastrantonio) talk to it, but she sticks her finger in it and tastes it! Now that was something I wanted to do, too!"



De Boer is quite frank when it comes to discussing the state of vfx today. "It's pretty sad that artists still have to funnel their talent through a pathetic three-button mouse or tablet pen to create their great work," he notes. "I had hoped that by now we would have seen more expressive ways for animators to interact with their CG characters and worlds. Hopefully all the advances in 3D sensors, VR, haptics and (GPU) processor speeds will allow us to one day work in a more fun virtual environment where feet do not go through the ground and elbows stay out of stomachs! I guess the fact that computers are still slow and we are stuck with keyboards and mice just shows how complex and difficult our work is. Even after creating CG for 30 years now I'm still blown away by the innovation, complexity and quality of the images that are created today. And there is still so much fun to be had!" ♦

Bong Joon-Ho's *Okja* is available for streaming on Netflix.



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The Intersection of Tools and Techniques

Visual effects pros discuss how the industry is impacted as new technology and methods proliferate.

By Michael Goldman

These days, evaluating the state of the art of visual effects can be difficult, considering the discipline, artists and tools are inexorably woven together now more than ever. In a sense, as award-winning, veteran visual effects supervisor Robert Legato suggests, today's digital miracles in pursuit of emotional believability and photorealism are not "new" in terms of their creative and emotional impact on viewers, but they are radically new in terms of how artists get there.

"If you think about it, motion capture is a form of roto capture that Disney was doing back when they did [*Snow White and the Seven Dwarfs* in 1937]," Legato says. "Back then, they photographed a woman in a dress, spinning around, and then animators copied it. Today, we

copy it with sensor markers [on a mo-cap stage], have the computer give us exact coordinates, and then [insert] movement into the digital character, but we are really just rotoscoping real life. Same thing with facial capture. Instead of using it as a record for animators to study frame-by-frame, we actually get coordinate information to essentially rotoscope a real person's face in order to animate a [digital character]. The underlying idea is a newer, cleverer invention, but it doesn't exactly replace the original invention. It just enhances and improves it."

That said, the stunning degree of creative success that visual effects artists are enjoying these days, even in the face of a host of business and economic challenges, is directly linked to groundbreaking technical breakthroughs in recent years that are fundamentally influencing the creative process. Legato, for instance, refers to game engine rendering technology as "a revolutionary process enhancement that has opened up a huge door for creativity, because you can now do things in a way that is most beneficial to the creative process [due to faster turnarounds]. The game

engine alone will revolutionize filmmaking."

Indeed, many breakthroughs are causing "the overall timeframe to come down from the moment you are actually on set shooting something to the moment when you get something back, rendered and looking pretty good for filmmakers to evaluate," emphasizes Darren Hendl, director of the Digital Human Group at Digital Domain. "Today, we don't [create visual effects] the way it was done in the past, where they were largely created afterward,

we work, from gathering reference during the shoot all the way through to final delivery."

"Not that it is a new format, but the number of IMAX movies is increasing, and they certainly need to be shot in a certain way, and then re-framed for more standard cinema screens due to aspect ratios being so different from each other, and also how an audience physically views an image as large as IMAX," Lockley says. "We most recently completed *Dunkirk* for IMAX and 70mm 5-perf at a reso-

lution of 6.1K. Most movies we work on are still rendered between 2K and 3K, so 6.1K is a big jump, and requires a complete re-think on how to build and texture assets for the movie."

Lockley adds that "texturing needs a lot of work, and gathering texture photogra-

'Today, we don't [create visual effects] the way it was done in the past, where they were largely created afterward, post captured or post animated. Now, we can really leverage an actor's performance, capture it at that time, and then turn it all around so much quicker.'

— Darren Hendl, director of Digital Domain's Digital Human Group



post captured or post animated. Now, we can really leverage an actor's performance, have [actors playing CG characters] interact with other actors, capture it at that time, and then turn it all around so much quicker. And that can really help directors, cinematographers, and the whole moviemaking process."

So with these concepts in mind, here's a look at a handful of developments that industry professionals say are altering, evolving or improving their creative approach to designing and executing visual effects.

Ultra High-Resolution Imagery

The rise of high dynamic range imagery for broadcast and cinema, 4K, 8K, and the renaissance of 70mm film for large-format moviemaking, among other developments, have increased rendering demands and caused technical changes to many facility pipelines, and how visual effects artists approach such work. According to Andy Lockley, visual effects supervisor at U.K.-based vfx house, Double Negative, "extra resolution required for [an IMAX movie] has had a big impact on the way

photography at the highest resolution and detail is critical to avoiding CG assets looking mushy in high-resolution frames. Our texture artists really have to keep an eye on whether the detailing is going to hold up on such a huge projection screen."

Such issues "come up all through our vfx pipeline," he adds. "Compositing has to be immaculate — every hair on an actor's head is enormous. Edge work comes under a lot of scrutiny, and roto and paint departments are pushed to a breaking point to keep every bit of detail. From a technical point of view, the processing power needed to render and view these large images is colossal, not to mention the disc space required to store it. Just getting 24FPS playback on 6K EXR frames was quite a challenge."

Virtual Production

In terms of virtual reality, it's not yet clear what the size, scope and nature of the market for actual VR content might eventually be, or how that might impact the visual effects industry. But what is clear is that tools for previsualization, production and post-production of ma-

ajor movies have flowed out of that sector and are now central to the visual-effects industry. Various combinations of virtual cinematography systems, high-end rendering engines, live-action camera tracking tools, real-time compositing methods on set, and much more are increasingly becoming part of the regular toolkit of visual effects professionals.

Further, in some cases, such techniques are the foundation of certain productions in which live-action people and elements are delicately sewn into photoreal CG environments, as the original *Avatar* (2009) and its upcoming sequels, 2016's *Jungle Book*, the upcoming *Lion King* (2019) and others are now illustrating.

Such technology and methods are another of those game-changers to help filmmakers better realize their ultimate vision, when used correctly. Legato, who has been a pioneer on the forefront of such techniques and who is now using them as visual effects supervisor on the upcoming *The Lion King*, says the whole point is to root such animated movies in reality. As such, virtual production techniques are evolving even as we speak into "a new way of making a film altogether – live-action versions of movies that do not look at all computer generated."

"You can now make a movie – a total movie, not just a sequence, but a movie – rooted in reality, even though it was artificially created," he says. "You go to great pains to make sure the artificial part is removed from the audience's purview. Anyone can now walk onto elaborate sets and learn how to light and shoot them, what the best way of telling their story is, without being limited by budget and time in the same way they would be limited by [scouting or shooting at a real location]."

Scott Meadows, visualization department supervisor at Digital Domain, agrees, adding that the previsualization side of the industry has been greatly aided by the arrival of VR-related tools.

"Obviously, utilizing game engines, just being able to pipe this stuff in real time, being able to work with the cinematographer and director in real time to visualize scenes ahead of time, and to provide lots of information to actors who are working on a blue-screen or mocap stage, is incredibly helpful," Meadows says. "We now have the tools to allow [filmmakers] and actors to see what [performances] would really be like in the digital world."

Hendler adds that sophisticated GPU rendering/game engines are allowing "preview renders for our animators" to now include "full global illumination, physically correct lighting and detailed facial performances just to pre-



view a performance. We can now see real quality very soon. This has sped up much of our workflow, and allows us to process hundreds of shots much quicker than we could before, because we are now seeing very close to final outputs quickly."

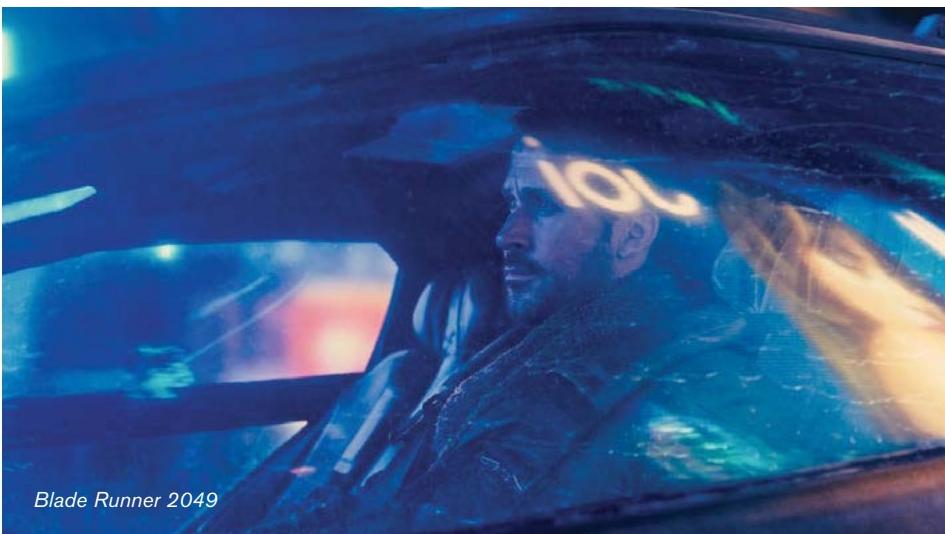
Meadows is particularly excited about these kinds of developments because they are allowing the previz process to become a far more important collaborative piece of the overall filmmaking framework.

"What is happening is that, a lot of times, they are figuring out a story in previz now," he says. "The director may use it to come up with a clearer idea of what he wants, or during the process we come up with entirely new ideas. So you get to work with the director to start laying paint onto the canvas, so to speak, and that is really great."

Beyond previz, Legato elaborates that the game engine phenomenon's great potential offers "not only a visual entrée into the virtual world, but a visceral one, as well. In the game engine, you are ensconced in a full 360 3D immersive world that responds in real time to your every move and whim. You sense and feel the same visceral response to an object, person or creature that invades your personal space, along with the sensation of height and peripheral vision. The end result, while still one step removed from the actual physical world, reproduces the sensations that are felt as if they were the same. 'What if' scenarios and abstract thoughts abound while being unencumbered by physical space, practicality or cost. It's a remarkable degree of freedom, bringing to life an abstract idea that was otherwise deemed too impractical to explore conventionally."

Performance Capture

The stunning seamless union of human actors with CG augmentation that has swept the industry in recent years in such franchises as the *Lord of the Rings*, *Avatar* and *Planet of the Apes* franchises seemingly sets a higher



Blade Runner 2049

benchmark every time a new project arrives. "Newer motion-capture suits, like the Xsens system that we use, allow the actor to put the suit on and go anywhere," Meadows says. "I was recently on a project working with a stunt team, and basically, on their off hours, we had them throw on the suits and act out some fight choreography and then quickly, within a day or two, we were able to move in and put cameras on it. The motion [on location] may not be as high fidelity as on a traditional mo-cap stage, but the flexibility that you get by simply being able to throw the suit on, wireless, running it off a laptop, or even controlling it with an iPad or iPhone to record, is tremendous."

"Mix that with the way they are using scanning devices today to scan sets during shoot-

the previous one. We have a baseline [collection of] character assets ready to go so that we don't have to reinvent every time. We also have a generic man and a generic woman that we can start off with and spawn characters from that. And we have a mo-cap library that we can then drop on that and make the most efficient workflow so that you can literally just sit down and start building scenes in minutes. That's important, because lots of times, directors come in and will want to temp something out. We have the tools that permit us to bring characters and scenes in easily, and apply mo-cap and poses to them. We have tools to facilitate cameras and build a master scene, where you get multiple angles, so that I can quickly sit down and create a camera with the direc-

tor, move to the next angle, create another angle, and build master scenes quickly, flipping back-and-forth between cameras in real time and in a scene with the director sitting right next to me."

Meadows adds that since major facilities like Digital Domain typically fo-

'It's always been all about us being able to just make a really good movie, and not consciously trying to break any new ground with vfx. So more of these types of innovations will be seen not just in the big superhero movies, but they will funnel down to real stories about real people, more imaginatively told.'

— Rob Legato, vfx supervisor, *The Jungle Book*



ing, so that when we are doing post-viz, we have all the data there and can use it in our software for tracking and to quickly do temp stuff for editorial. That is real human emotion data to drive digital humans or creatures, and it is speeding up the entire pipeline."

Better Pipelines

Another offshoot of these developments is the fact that major facilities are busy these days upgrading pipelines and workflows to

focus their efforts on the highest-end, primary release format and resolution of moving images, they still have to be nimble about being able to scale previz or temp versions of work up or down, depending on what is needed at the time. A range of off-shelf tools, he says, have made that task easier in terms of keeping with the efficiency theme.

"ZBrush [a 3D digital sculpting application from Pixologic Inc.] and Substance Painter [Allegorithmic's 3D painting software], for ex-

ample, are two pieces of software that allow you to create different levels of detail very quickly," he says. "After all, you have to make the assets work in the pipeline, no matter what level of detail is required."

Looking Ahead

Industry professionals say more evolutions are percolating that they expect will further improve efficiency and how their creative process works. These range from cloud computing to a wide range of digital simulation and rendering breakthroughs to a revolution in virtual set systems for broadcast television, and all the way to the prospect of integrating artificial intelligence (AI) and deep learning computer algorithms into the vfx process.

Dr. Ed Catmull, co-founder of Pixar and President of Pixar and Walt Disney Animation Studios, says he expects deep learning technologies "to have an impact" on the industry, even though it remains unclear in exactly what ways.

Catmull points out that major studios like the Disney/Pixar/ILM sister companies and others have major research groups hard at work today trying to figure out how to integrate such things in a way that broadens creative vistas, ranging from automation to faster applications to increased interactivity, and so on.

"It's the early days, but [deep learning tools] appear likely to be very important to visual ef-

fects and image generation," Catmull says. "That is what our research groups do. They are working on some things internally that I would never have guessed they would have tried. They aren't all game-changers, but there is definitely something there worth investing in, even if some of it is speculative. I believe the industry should always be working on some things of a speculative nature, and deep learning is definitely a space we should be operating in."

At the end of the day, however, Legato says what's really groundbreaking is how fast and

than the current techniques allowed. But we forced this innovation into being. Then, by the time I worked on *Aviator* [2004], the water we spent millions of dollars developing as a useful production tool for *Titanic* cost about 200 bucks as an After Effects plug-in. So now, today, without any ability – I'm not a talented digital artist, yet I'm able to easily create believable water simulations myself."

"While it might be pretty simple and no great shakes, it looks normal and natural, and without hardly a fraction of the budget that *Titanic* had for R&D," adds Legato. "So that sim-

ple illustration, and many more innovations since that time, can now be done much more commonly now on smaller films, independent films. I'm not saying anybody could do a *Jungle Book* on an independent budget today, but in a few years from now, you will probably be able to do that level of work and beyond. It's always

'Texturing needs a lot of work, and gathering texture photography at the highest resolution and detail is critical to avoiding CG assets looking mushy in high-resolution frames. Our texture artists really have to keep an eye on whether the detailing is going to hold up on such a huge projection screen.'

– Andy Lockley, vfx supervisor, Double Negative



comprehensively such new tools and developments are proliferating in a way that makes them of practical use to, literally, the entire film-making community, and not only for those working major vfx-oriented tentpole films.

"When I did *Titanic* [1997], the big miracle at the time was simulating [digital] water at a high level," Legato says. "At the time, the art of what we wanted to do [with water] was more

been all about us being able to just make a really good movie, and not consciously trying to break any new ground with vfx. It's only a byproduct of creativity, trying to tell the same stories in a new and fresh way. So more of these types of innovations will be seen not just in the big superhero movies, but they will funnel down to real stories about real people, more imaginatively told." ◆

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Blade Runner 2049



Star Wars: The Last Jedi



The Shape of Water



War for the Planet of the Apes



Dunkirk

Digital Dynamos

A look back at some of the top vfx contenders of the year

This month, the Visual Effects Branch Executive Committee of the Academy will compile a list of 20 films for consideration for the Oscar. Then, in January, the list will be whittled down to 10 titles that will participate in the annual visual effects bake-off. The final five nominees will be announced on January 23 with the rest of the categories. Here are some of the films that are rating highly on awards watchers' radars this year, and the vfx supervisors who made them happen:

Major Contenders

(in alphabetical order)

Beauty and the Beast

(Disney)

Kyle McCulloch, Kelly Port, Glen Pratt, Paul Corbould

Blade Runner 2049

(Warner Bros./Columbia/Alcon Ent.)

Richard Clegg, Paul Lambert, Viktor Muller, John Nelson

Dunkirk

(Warner Bros.)

Andrew Jackson, Andrew Lockley, Tim McGovern, Paul Corbould

Guardians of the Galaxy Vol. 2

(Disney/Marvel Studios)

Matthew Crnich, Ray McMaster, Kevin Andrew Smith, Doug Spilatro, Christopher Townsend

Logan

(20th Century Fox)

Berj Bannayan, Richard Betts, Chas Jarrett, Doug Spilatro, Chris Spry

Star Wars: The Last Jedi

(Disney)

Richard Bain, Ben Morris, Michael Mulholland, Chris Corbould

The Shape of Water

(Fox Searchlight)

Dennis Berardi

Spider-Man: Homecoming

(Disney/Marvel)

Theodore Bialek, Lou Pecora, Doug Spilatro, Daniel Sudick

Thor: Ragnarok

(Disney/Marvel)

Jake Morrison, Alexis Wajsbrod, Chad Wiebe, Brian Cox

War for the Planet of the Apes

(20th Century Fox)

Joe Letteri, Dan Lemmon, Erik Winquist, Dan Cervin

Wonder Woman

(Warner Bros.)

Frazer Churchill, Viktor Muller, Jessica Norman, Bill Westenhofer

Other Possibilities

Alien: Covenant (20th Century Fox)

It (Warner Bros./New Line Cinemas)

Justice League (Warner Bros.)

Kong: Skull Island (Warner Bros.)

The Mountain Between Us (20th Century Fox)

Okja (Netflix)

Pirates of the Caribbean: Dead Men Tell No Tales (Disney)

Transformers: The Last Knight (Paramount)

Top Tech Tools and Trends of the Year

By Todd Sheridan Perry

As we count the days to the beginning of the new year, it's a good time to look back at some of the top tech tools of 2017. Some are new, and some have evolved or pivoted into something newer. Some of them are simply becoming more embraced in the industry, so their importance to what we do has increased. Enjoy!

Atom View. This effect tool takes point data and drives it through game or VR systems to provide real-time and high-fidelity feedback for 3D models. nurulize.com/atom-view

Allegorithmic Substance Designer/Painter. Has been around for a few years, but with its PBR (physically-based rendering) shaders and display, lookdev and texturework has never been so fun – or fast. More and more visual effects companies have embraced the workflow. allegorithmic.com

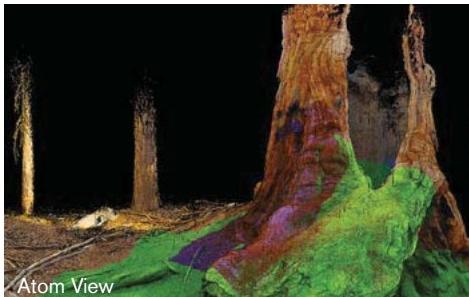
X-Rite TAC7 Ecosystem. This useful scanner captures and stores color, texture, gloss and other surface appearance characteristics of physical material samples and helps out in the entertainment business as well. xrite.com/categories/appearance/tac7

GPU Rendering (again). Clarisse and RedShift just keep getting more and more involved in speeding up our rendering (and making clients think our job is easy). Throwing rendering to the graphics cards is a thing now – especially when the tools are becoming platform agnostic. redshift3d.com and isotropix.com

Universal Scene Description. Developed by the smart people at Pixar and adopted by other smart people everywhere, USD is a system of assembling assets (models, lights, cameras, etc.) into a scene, and then allowing that scene to be read by multiple applications. It also is flexible enough to generate master scenes, that can then be adjusted per shot with overrides. graphics.pixar.com/usd

MaterialX. This one was developed by the smart people at ILM, and then shared with everyone as a way to have transferrable shaders between platforms. It's good to see this sharing trend! materialx.org

Computer Vision and Machine Learning.



Atom View



Allegorithmic Substance Designer
[artist Daniel Thiger]

This concept (CVML) uses deep learning to calculate the incalculable: how the human brain sees and identifies things.

ARKit. This development platform on OSX through xCode creates augmented reality content on your favorite iOS devices. Yes, it was hugely responsible for the *Pokémon GO* epidemic. developer.apple.com/arkit

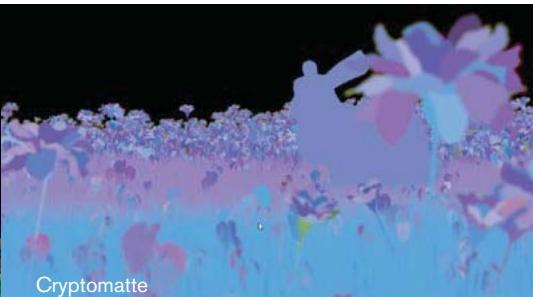
Pinscreen's Facial Tracking/Avatar Rebuilding. It drives the Animoji on the new iOS (for better or worse), and potentially places tech into consumers' hands to transfer their performance onto their (or another character's) face. Leading to way for how we will interact in VR or AR.

glTF 2.0. GL Transmission Format may not be the most intuitive name, but this unified exchange program developed by Khronos Group is an effective way to represent 3D assets in web space or apps. The 2.0 version incorporates PBR rendering (à la Allegorithmic material mentioned above). khronos.org/gltf

Eddy for Nuke. We now have a fluid dynamics system in Nuke! This plugin simulates gaseous phenomena inside Nuke, making it possible to work with smoke, fire and similar fluid sims fast and interactively. It's also a physically-based volume renderer and compositing system! Woo hoo! vortechsfx.com

Cryptomatte. Mattes made easy through a set of object IDs, supporting transparency, depth of field, etc. github.com/psyop/cryptomatte ♦

For those of you who would like to take a deeper peek into the future of computer graphics, I recommend checking out the SIGGRAPH White Papers every year. Put together by super star academics around the world, these papers reveal the science that what will be implemented into the software and practical workflows in the next two years. s2017.siggraph.org/technical-papers. Happy holidays, everyone!



Cryptomatte



ARKit



MaterialX [ILM, Rogue One]



Animoji



USD [Pixar, Piper]



X-Rite TAC7



glTF 7



GPU Redshift
[Cedric Epiller]



Eddy for Nuke

Tech Reviews

by Todd Sheridan Perry



Autodesk's Maya 2018

Autodesk used to released its M&E products at the same time, giving you a burst of new features in Maya, Max, MotionBuilder, etc. However, now it appears that with the migration to a subscription-based model, Autodesk is pushing out releases and updates throughout the year without all the fanfare that existed in the past. For instance, Maya 2018 had its debut at this year's SIGGRAPH, and within two months, 2018.1 is already out and available for subscribers. It is a tiny, almost utilitarian point release in comparison to 3DStudio Max 2018 (which we reviewed last month), but it is indicative of a development approach that puts forth the idea that some features or fixes don't need to sit around for a year waiting for other, farther-reaching features to be ready. You just quietly send out new stuff to the subscriber base.

So what about this subscriber model, anyway? I've heard pros and cons for the shift ever since Adobe really went big with it, and I can see both sides. You have those who would prefer to buy a car and own it rather than renew a lease every two years and continually be driving the latest model. But from a developer standpoint, it seems like everyone is moving toward the subscription mode – and enough users don't mind that it isn't going to change anytime soon. Autodesk is sweetening the

deal beyond the consistent updates with Cloud Rights, which gives to you the ability to launch UI-less licenses of Max or Maya in the Cloud in order to expand your computing power. The license (or licenses if you have a multi-user subscription) covers renders, simulations or caching.

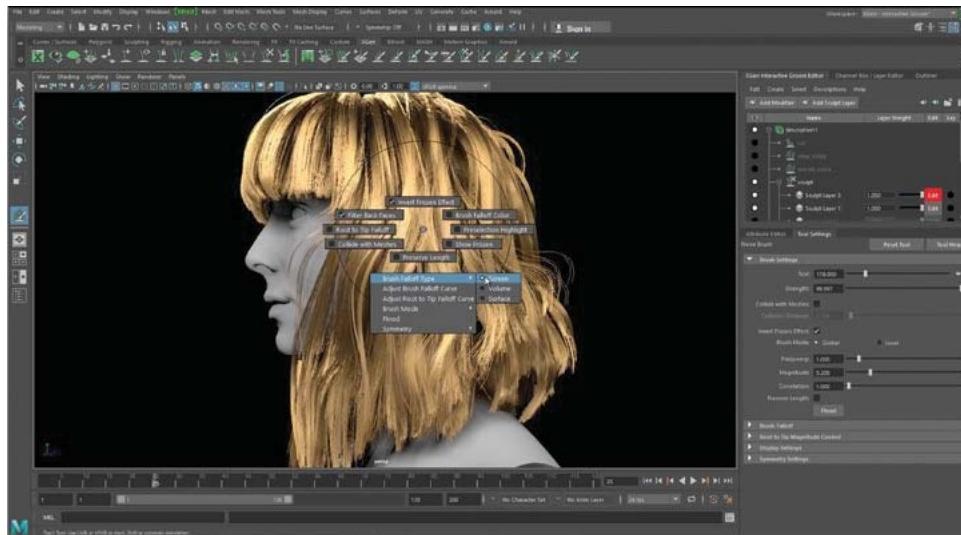
But enough with the boring stuff. What's new in Maya 2018? Well, it seems like everyone is excited about a new UV workflow with tools that make laying out UVs faster and more efficient. And if you've read my past articles, you know how much I'm not a fan of UVs. Anything to speed along the process is a godsend.

The love is spread out through the process. XGen keeps getting more robust with clumping in interactive grooming. Animation and rigging have some UI updates to make the process less cluttered with rig controllers that turn on and off based on cursor proximity. And mographers are still gaining stride with tools like advanced text tools, direct dynamics through MASH and, most significantly in my book, a Live Link to After Effects – which up now has really been the domain for Cinema4D.

Of course, I won't be able to fit everything in this space. And now with updates coming more frequently, I'm not going to be able to stay on top of everything. But I promise to do my best!

Website: www.autodesk.com/products/maya

Price: \$1,470 for annual subscription;
\$185 monthly



Faceware, Xsens & Reallusion iClone

There is a great synergistic relationship between Reallusion's iClone real-time animation system, FaceWare's headcams and software, and the Xsens MVN motion-capture system, which delivers real-time performance capture of both body and face and applies it directly to CG characters with real-time feedback. Recently, Katie Jo Turk from Faceware, Chris Adamson from Xsens and John Martin from Reallusion met up with me to squeeze me into a tight Lycra suit with a helmet and camera strapped to my head.

In the past, I have written about the flexibility of iClone for character creation and manipulation, motion and motion-capture application, animation tools, and a vast library of materials and assets you can choose from. But a couple of months ago, Faceware got in the mix to open up a whole new world to indie animators and studios.

Faceware Technologies, as its name implies, specializes in markerless facial tracking using computer vision and machine learning to obtain highly detailed data of a performer's facial movements. Faceware offers headgear hardware: a high-end model Pro HD Mark III system with tiny HD camera (to prevent occluding the performer's eye-line), onboard lights for consistent lighting on the face, a belt for extra battery power and the video transmitter, and a USB to HDMI converter that can feed any number of recording devices. Or you can opt for a less expensive model that uses a GoPro instead of the fancier camera, with the benefit of controlling the camera with the iPhone app. But really, any video device that captures your performance will work with Faceware because the magic is in the code, which now has a plugin that interfaces directly with iClone. This allows a multitude of controls and sliders to finesse or exaggerate your captured performance and to remap it onto any number of characters.

So, now we have a robust animation system with a world of character assets, and a way to capture facial performance and map it onto

those characters. If you are using headgear, then the performer can move around – because physical motion does affect the performance – without the camera losing the facial features. We now need to capture the body motion!

This is where the Xsens MVN suit comes in. For my demonstration, we had the latest Awinda suit, which consists of a shirt and a bunch of straps that you loop around your limbs at key points. Each strap holds a matchbook-size wireless tracker with a bunch of technology in it that measures acceleration and magnetic fields and stuff to assess where it is in space. All that data is fed back to a receiver which interfaces with iClone! The higher-end MVN Link suit is a complete Lycra outfit with the trackers wired together, which can sample at a higher rate for more fidelity. But we aren't assessing pro athlete dynamics or planning for the best prosthetic to replace a leg – I'm just running and jumping around my house like a fool, so the Awinda is perfectly fine. No matter where I ran around, back at my HP Mobile Workstation, we were recording both my antics and my face, and applying it to the 3D character on the desktop.

That recorded data can now be post-processed after the performance – either through sliders, which tweak the performance on the fly as you watch it play, or if you want to dig in deep, you can edit at a keyframe level. We can



now refine the data within iClone itself and get some cool stuff going – especially since the latest iClone is getting into the Physically Based Rendering game, and integrating real camera data. But what if we have a broader pipeline that uses Maya, or Max, or we are using Unreal or Unity? Reallusion has 3DXchange for both importing assets and data, and exporting them out to a plethora of other 3D packages.

The overall setup time for the whole system was maybe a half hour, which included making sure that all the software was set up on my Mobile Workstation with the latest and greatest builds; getting the right-sized headgear for

my big head, calibrating the cameras, and then getting the suit situated. (I totally recommend getting a friend to help out with this. Putting the suit on alone is a bit frustrating. Maybe not as frustrating as say, tying a bow tie, but it's way easier with someone to help out.) The headgear fits in a small Pelican case, including the cables, batteries, adapters and Teradek video transmitter. The Xsens fits in a backpack, and iClone fits inside your laptop. You are quite literally a walking motion-capture studio.

My mind is swirling with applications from previz and pre-production on films, to planning shoots in VR (blocking out actors in a space before even getting to the space), as well as even non-film applications (God forbid), like dance analysis, or martial arts schools – any place where feedback on physical performance is necessary to bring people to the next level. And the portability of the whole system makes it convenient and accessible.

All of these tools fitting together gets me excited about how this can benefit independent artists who may not have access to a large motion-capture volume, or animation teams that just want to quickly block out beats in a performance and then add on top of it. We are living in the future, people!

[This demonstration was accomplished using an HP ZBook 15 G3 running Windows 7.]
iclone.reallusion.com
facewaretech.com
www.xsens



Todd Sheridan Perry is a visual effects supervisor and digital artist who has worked on features such as *The Lord of the Rings: The Two Towers*, *Speed Racer* and *Avengers: Age of Ultron*. You can reach him at todd@teaspoonvfx.com.

Embracing an Unknown Future

Future Lighthouse's stunning 20-minute short *Melita* takes us to an unpredictable dystopian world.
By Ramin Zahed

If you need more proof that animated VR projects are already transporting us to unforgettable places, you have to check out Future Lighthouse's new short *Melita*, which is the first offering in a proposed trilogy. Directed by Future Lighthouse CEO Nicolás Alcalá, the 20-minute chapter centers on a female AI robot that is working with humans to find a new home for mankind in a dystopian future.

Alcalá tells us that he got the idea for *Melita* after he read an article about a NASA robot sent to an asteroid. "This robot goes into hibernation mode during winter time, losing all contact with Earth until its solar panels start to get enough energy to wake them up again, *Melita* is the first in a trilogy, so you will see more bits that were inspired by this article in our second film."

The 14-person team at Madrid and L.A.-based Future Lighthouse used Unreal engine to create the animation, which took about 18 months to deliver. "We also relied on some other 3D modeling tools," says Alcalá.

"Most of the animation was done by hand, without motion capture. We also used Wwise for the positional sound."

The team had to tackle many obstacles as they set out to realize Alcalá's vision. "We had many challenges," the director recalls. "On a per-

sonal note, this was my first animated project, so everything works differently in animation than live-action projects. I needed to re-learn many things. Also, many of the things we tried hadn't been done before in VR, from certain camera movements to the long duration or the kind of animation we created. This has been a very spe-

says there are too many factors that are beyond our control. "What I want for VR is a different story," he notes. "I want it to be part of our daily lives. I want it to be used as a tool to enhance our compassion. I believe VR can help us create a world to our measure: more compassionate, more integral, more profound ... and I'd love to see us take full advantage of all that it has to offer."

The director also points out that camera movement is going to play a huge role in the future of VR. "That passive interactivity is something we should start to work on more deeply," he says. "There is huge potential in the fact that we can have narratives that completely immerse you in the story even if they are animated. I also learned a lot about the importance of



'I believe VR can help us create a world to our measure: more compassionate, more integral, more profound ... and I'd love to see us take full advantage of all that it has to offer.'

— Future Lighthouse CEO Nicolás Alcalá



cial project, but we can proudly say that we have succeeded!"

Mind-Expanding Bots

Alcalá says he loves experimenting with the possibilities of VR. "It's a technology that is going to revolutionize who we are as human beings because it's another evolution of our language. To be at the forefront of that, and to begin to tell stories in this way, is an opportunity that I'm immensely grateful for. I truly believe that virtual reality is the key to expanding our consciousness, and we need that right now."

When asked about the future of the emerging technology, Alcalá

sound and music, and the tremendous ability of VR to generate engagement with the characters."

Melita, which is available exclusively for the Oculus Rift VR headset, has already received praise from both the tech and animation communities. Alcalá says he has been quite touched by the heartwarming response the short has generated. "It leads me to believe that we are reaching people on an emotional level, which is what you strive for as a storyteller," he says. "The fact that people are having discussions after seeing our short, about climate change, about our future as a species on this Earth, as well as our relationship to AI ... that is profoundly rewarding." ♦

For more information, visit futurelighthouse.com/melita.



Bickering Friends vs. Monsters and Demons

By Charles Solomon

Ushio and Tora: The Complete TV Series

Sentai Filmworks: \$69.99; 5 discs, Blu-ray;
\$29.99, 5 discs, DVD

In the early 16th century, a warrior-monk vanquished a powerful demon by pinning it to a rock with the Beast Spear, an enchanted weapon forged in China centuries earlier. Five hundred years later, high school student Ushio Aotsuki (David Matranga), a descendant of the monk, discovers the demon is still transfixed to the cellar wall of his family's Shinto shrine. Although he looks like a cross between a man and lion, the demon's ochre color and stripes earned him the name Tora ("tiger," voiced by Brett Weaver).

After Tora persuades Ushio to free him, the teenager faces two grave problems: A monster intent on devouring him and a powerful magical weapon he doesn't know how to wield. Fortunately, the Beast Spear has a mind of its own, and Ushio is able to keep his foe in check. But freeing Tora has attracted hordes of minor demons and *yokai* ("monsters"). They begin attacking people, including Ushio's two friends: dark-haired, straightforward Asako Nakamura (Allison Sumrall) and gentle Mayuko Inoue (Luci Christian). To protect his friends and defeat the weird-looking *yokai*, Ushio must work with Tora, despite their mutual misgivings.

Tora has to cope with the changes 500 years have brought to life in Japan. He learns to dodge cars and buses, and discovers that while they're not as tasty as humans, he likes hamburgers. Although Tora insists he'll devour Ushio, and

Ushio threatens to destroy Tora with the Spear, the two become grudging friends as they subdue a succession of bizarre creatures.

When Ushio uses the Beast Spear, he transforms into a long-haired, wild-eyed warrior. The Spear's magic is so powerful, it has taken possession of numerous samurai over the centuries, slowly turning them into stone monsters. Can Ushio avoid a similar fate? He and Tora need all the strength they can muster as the plot grows more complicated and they square off against the formidable Hakumen no Mono (literally "the white-faced one," voice by John

more than 20 years, then MAPPA (Maruyama Animation Produce Project Association) and Studio VOLN created this 39-episode broadcast series.

Ushio and Tora feels curiously prescient. With his square nose and spiky hair, Ushio looks like Ippo Makunouchi, the nerd-turned-featherweight boxing champion in *Fighting Spirit*. Ushio's slugfests with his dismissive father resemble Ichigo Kurosaki's fights with his nutty dad in *Bleach*. Although supernatural fox spirits are common in Japanese folk tales, and ancient, nine-tailed ones command singular powers, the

monstrous Hakumen no Mono will remind viewers of the terrible multi-tailed demons in *Naruto*.

The opening, with Ushio freeing Tora, anticipates the original OVA *Tenchi Muyo!*, when Tenchi Masaaki frees Ryoko, the demon entombed in his family's shrine. It's even closer to Rumiko Takahashi's smash hit *Inu-Yasha*, which debuted in *Weekly Shonen Sunday* in 1996: In the long-running manga and broadcast series, Kagome Higurashi, a normal 15-year-old girl, falls down a dry well on the grounds of her family's shrine – and finds herself in the Warring States period (c. 1467-

1603), 50 years after her ancestress Kikyo transfixed the half-human/half dog-demon Inu-Yasha to a tree with a magic arrow.

Despite their endless bickering, Ushio and Tora emerge as very likable characters, and this new version of their adventures looks considerably better than the cheaply animated OVA. As Neil Simon proved in *The Odd Couple*, friends who don't get along are more fun than friends who do. ♦

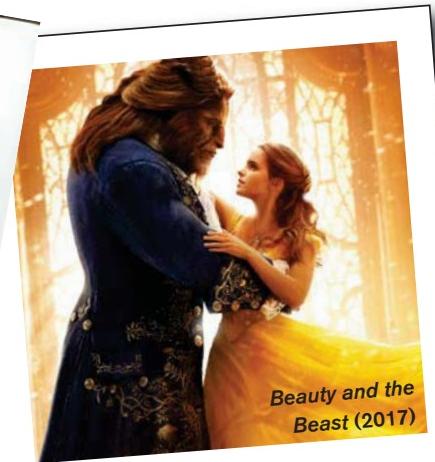
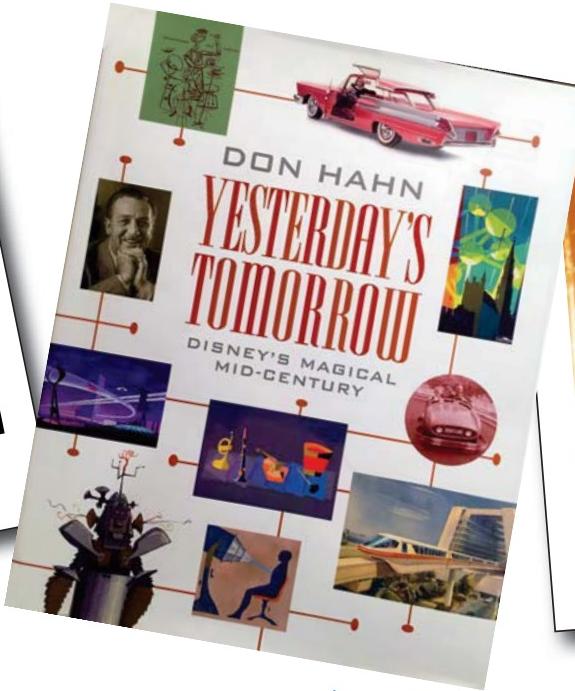
'Ushio and Tora feels curiously prescient. With his square nose and spiky hair, Ushio looks like Ippo Makunouchi, the nerd turned featherweight boxing champion in Fighting Spirit.'



Swasey), a nine-tailed fox demon determined to destroy Japan and its inhabitants. Although somewhat protracted, the final battle is suitably spectacular.

A Mythic Manga Tradition

Ushio and Tora began as a manga by Kazuhiko Fujita that ran in *Weekly Shonen Sunday* magazine in 1990. It was adapted to a string of OVAs in 1992-93. The property sat idle for



Beauty and the Beast (2017)

Ten Questions For Don Hahn

There's no telling what amazing, creative project Oscar-nominated producer (*The Lion King*, *Beauty and the Beast*, *Maleficent*), author and documentary filmmaker Don Hahn will come up with next. We thought it was a great time to catch up with the talented Renaissance man now that his new book ***Yesterday's Tomorrow: Disney's Magical Mid-Century*** (Disney Editions, \$33.24) is available for sale.

What prompted you to write the book?

I grew up in Southern California, which is a place like no other. People have always come here to reinvent themselves in a land of sunshine, beaches and optimism. The first freeway was built here, modern architecture and design sprang from here, NASA explored space from here, the first theme parks like Knott's Berry Farm, Santa's Village and, of course, Disneyland came from the imagination of Californians. Walt Disney didn't go to New York or Chicago. He came to Los Angeles to make it as a film director, and it's this town that supported and encouraged the arts and artists to build his ideas into reality. That perfect

storm of people and events in the middle of the 20th century has always fascinated me and that's why I wanted to write this book and tell this story.

What is the most surprising thing you learned while you were researching the subject?

The most surprising revelation was how Disneyland was conceived, built and financed. Walt himself set up a separate company, WED Enterprises, to design and build the park. He used set designers, not architects, to visualize the themed lands. ABC Television financed it as part of a television deal to supply programming for the network that was originally called *Disneyland*. It was an explosion of clever deals, impossible deadlines and brilliant civic planning that went into the construction of the park and the story of Disneyland alone was worth writing the book.

Why do you think we are still drawn to the mid-century period's art, lifestyle and design principles?

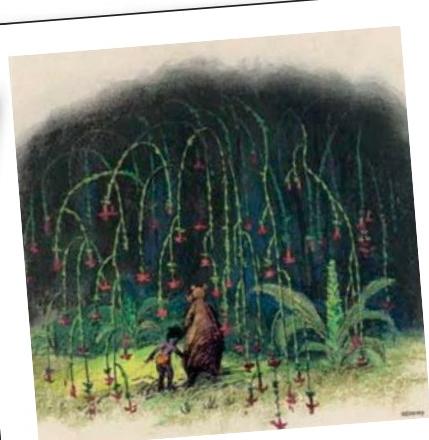
So much of the mid-century aesthetic was the

shedding of detail and ornamentation in favor of simple statements in architecture and art. The world had suffered through two World Wars, a Great Depression, and before that a century of Victorian life that must have been constraining at best. Then Matisse and Picasso start to shed old formal styles and paint with simple shapes. Animators like Oskar Fischinger picked up on the abstraction in this work, as did Disney in some of his prewar films like *Fantasia*. But after the war it was films like *Sleeping Beauty*, *Jungle Book* and *101 Dalmatians* that started to show the modernist ambition of the artist and the audience ate it up, myself included. Mid-century meant simple, elegant, modern, space age and optimistic, and that never goes out of style.

Can you tell us a little bit about your upcoming documentary *The Gamble House*?

I've been interested in architecture all my life, particularly in modern architecture. Few people know the work of Charles and Henry Greene, who were simply the masters of Arts and Crafts architecture and brought a modern

The mid-century art aesthetic influenced Disney classic such as *Sleeping Beauty* (1959), *101 Dalmatians* (1961) and *The Jungle Book* (1967)



sensibility to their houses. One of those houses was designed and built for David and Mary Gamble, heirs to the Procter & Gamble fortune. They commissioned the Greenes to design and build not only the house but the furniture, carpets and light fixtures throughout the home. Because of this approach to design, the Gamble House is truly "Architecture as Art" and at this point in my career I only want to tell stories about the artistic heroes in our world. The Greenes only designed and built for a short time at the beginning of the century but their work is incredibly brilliant and you can visit the Gamble House today and see the effect of their artistic vision. Plus, it's Doc Brown's house from *Back to the Future*.

What was the best part of exec producing this year's live-action *Beauty and the Beast*?

Beauty was a pleasure because so much of the story work and heavy lifting had been done by our crew back in 1991 when the original film came out. Bill Condon, the director of this year's live version of the film, was able to capture the spirit of the original, but also flesh out the story in a way that added more dimension to the story. Most of all, we were lucky to attract a brilliant cast who took the work of our animators and ran with it. Emma [Watson] and Dan [Stevens] as Belle and the Beast were able to do the impossible and make us fall in love with them as characters as they themselves fell in love ... not an easy task considering that Beast is virtually an animated character.

What do you tell naysayers who complain about live-action adaptations of Disney's classic toons?

Stories are meant to be told and in the case of these new films, they are meant to be retold. It's been 25 years since we made these movies and to have other filmmakers retell them with today's technology is exactly what the movie business is: telling and retelling the greatest stories on Earth. Not everyone will like every detail, and that's to be expected even of original movies. But to bring these stories to a new generation doesn't negate the original film, and yet offers a new movie-going experience to audiences who never tire of hearing these stories told over the past thousand years or so.

What was the toon that changed your life?

I loved Jay Ward cartoons when I was growing up. They still stand as the funniest and best.

What was best gift you ever received?

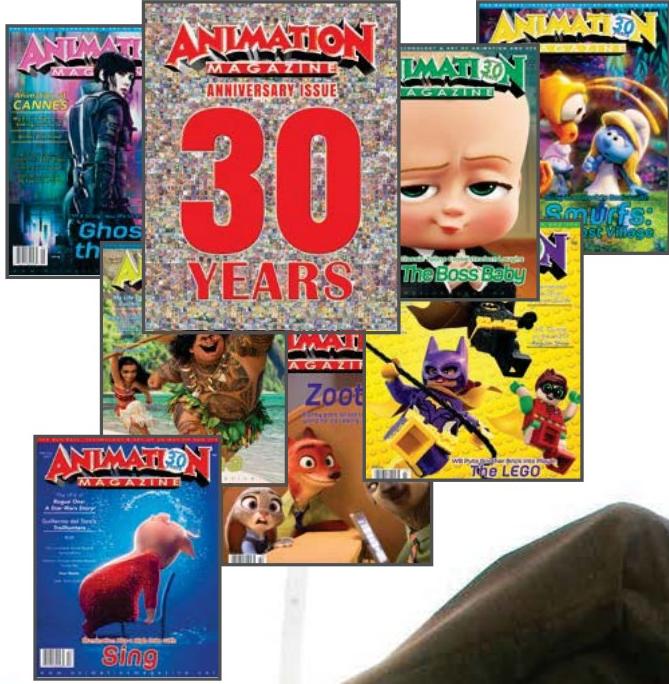
Aside from my daughter, Gary Trousdale, the director of *Beauty and the Beast*, once gave me a plate of fake waffles complete with syrup and butter. They are incredibly realistic, like the kind a restaurant would use in their front window display. That's been 20 years ago and people still want to touch them and take them every time they come into my studio. The magic of fake waffles is the gift that keeps on giving!

What's the best advice to give people who want to succeed in the animation business?

Persist. Nobody gets hired on the first resume or the first portfolio. Get your work out there and seen, get it on the web, and make sure it's always up to date, then stay in touch with the recruiters who hire for their studios. Don't rule out small studios. Some of the best work is being done in smaller, more experimental studios where you will likely be called on to do a little bit of everything. Finally, be open to change. You might leave college wanting to be a rigger at Pixar, but as you mature as an artist, keep your eyes open to other jobs, to growth and learning and to how your tastes are changing.

What is the secret of leading a happy creative life?

Stay busy. Make other people happy. Travel. Be open to new ideas. Be curious. Study other artists, animators, painters, storytellers. Read biographies. Exercise. Travel some more. Keep your overhead low so that you can save money for rainy days. Love your work, and if you don't, move on to new work. Plan in short spurts – you don't always have to know what you are going to do for the rest of your life. Travel again. Find a life mate that you can share your struggles and victories with. Live in a place that you love and make a home that is a safe haven for you. Always be a teacher and a learner. Respect others, especially those with less power than you. Draw more. Laugh more. Eat more pie. And finally, travel. ♦



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Best Original Song

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MUSIC & LYRICS BY

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